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Experience

THERE is a comforting proverb which tells us that if a man never has been a fool, he never will be wise. This does not mean that we should do foolish things in order to learn wisdom. What it does mean is, that we should improve the future by means of our past experience. We should profit by our blunders and mistakes, and the broader the range of our digested experience, the sounder will be our judgment.

Medical knowledge is not all acquired in a medical college, but is made up of little bits of information, little observations picked up in the course of daily bedside experience; the proper sources of knowledge are not books, but life, experience, personal thinking, feeling, and acting. It is not the quantity of knowledge a doctor acquires from books but the useful lessons learned from past failures and successes—from a rich experience—that is of consequence.

The experience gained from books, though of immense value, is but of the nature of learning; whereas the experience gained from practice is of the nature of wisdom, and a store of clinical experience is worth more than a stock of theory.

Practical wisdom is only to be learned in the school of experience. The doctor made wise by experience is better able to judge correctly of the things which come under his observation. One's knowledge, in fact, cannot go beyond his experience, and the oft-repeated experience of a trustworthy physician regarding the treatment of disease may be taken for knowledge.

We progress only through experience by bringing forward from yesterday the good of yesterday, and adding it to the store of the good of today. True

progress is improvement, not movement, merely. Its measure is not the ground passed over, but what has been gained from our own experience and from our association with persons wiser, better and more experienced than ourselves.

The act of seizing every bit of knowledge, every scrap of information, no matter how insignificant it may seem at the time, the laying hold of every opportunity and every occasion, and grinding them all up into experience, cannot be overestimated. A wide experience will do this for you: it will teach you to be forbearant toward those who differ from you, provided they observe patiently, think honestly, and utter their convictions freely and truthfully.

So get experience every time an opportunity presents itself.

The results of experience are, of course, only to be achieved by living; and living is a question of time.

Ketch yer grip an' hang a-hold! Don't you stop to grumble.
 Be a man an' hold yer head right up in the air.
 You ain't never down, you know, until you take a tumble,
 Even then there's no excuse for you're lyin' there.
 Bounce right on your feet again with determination.
 Never be disheartened if you take some little falls;
 'Tisn't time just yet, you know, fer your extermination—
 Don't be a dead one till the undertaker calls.

MY CREED

Do not keep the alabaster boxes of your love and tenderness sealed up until your friends are dead. Fill their lives with sweetness. Speak approving, cheering words while their ears can hear them, and while their hearts can be thrilled and made happier by them; the kind things you mean to say when they are gone, say before they go. The flowers you mean to send for their coffins, send to brighten and sweeten their homes before they leave them.

If my friends have alabaster boxes laid away, full of fragrant perfumes of sympathy and affection, which they intended to break over my dead body, I would rather they would bring them out in my weary and troubled hours and open them, that I may be refreshed and cheered by them while I need them. I would rather have a plain coffin without a flower, a funeral without an eulogy, than a life without the sweetness of love and sympathy.

Let us learn to anoint our friends beforehand for their burial. Postmortem kindness does not cheer the troubled spirit. Flowers on the coffin cast no fragrance backward over life's weary way.

I present you herewith my ideas, my beliefs, my experience, in the things that bring

you success as a doctor. I am going here to have my say, without a "provided," an "if" or a "but." I shall make no provisions for a retreat but come out in the open and give you all I have to offer. I expect criticism and want it. If I am wrong in any particular I want to know it far more than any of you may want to tell me. I can not afford to be wrong with many thousands of physicians reading my words and putting into actual use my suggestions for the benefit or otherwise of the sick and dying. It is my duty to speak plainly and squarely to the point; it is yours to aid, support, correct, combat, extend my work as the truth teaches you.

Here I shall present my best suggestions as to the bettering of your work with the sick, your position in the community and your prosperity as men, and your qualifications as physicians. You will find the active principles prominent in my writings, not because I am specially advocating these remedies and the methods they make possible, but because they are better than any others. If anything still better offers, I shall drop the alkaloids and turn to the better. There isn't anything apparent above the horizon yet!

This is essentially a shirt-sleeve work—coats and dignities chucked, the polite amenities and the Johnsonian sesquipedalities dropped. You and I are sitting in our little back office, talking over our affairs the way they are and not as we show them to the public eye. We are not on parade. We haven't collar, cuffs, even shoes on, and our shirt is open at the neck. We are getting at the facts of the case. "We have tried out the opsonins and got no benefits; but from the local hyperemia method we got good results," says a friend—but he says it here and will not put it in print, for that requires a tedious process of reading, investigation, accurate experimentation, and a prolonged period of time. Very good things these, but—do *you* find time for such things?

We can't always wait for this when we have a thing too good to keep back, and above all this want the verdict from thousands of clinical observers who are worth more than

any single laboratory worker or any number of them.

GROSS DRUGS VS. ACTIVE PRINCIPLES

Under the above heading there is a very sensible editorial in *The New York Medical Journal*. It is a significant one, too, for though the writer adheres to the ancient form of drugs in the main, his argument is presented in a dispassionate, sensible manner which must commend itself to all readers. This is especially notable, since the editor of that journal is a man noted for his conservatism. The journal is one of the few medical periodicals which still adheres to the use of diphthongs, and this little matter is a certain index as to the mental characteristics of the editor. Dr. Foster says "the time is yet far distant when we can depend upon active principles alone for the curative treatment of disease." In this we heartily agree with him. In fact we do not believe the time will ever come when we can depend on active principles alone.

In advocating crude drugs, he brings up, as a matter of course, rhubarb and ergot, of which as yet the exact active principles have not been isolated, or at least no single active principle has been isolated which presents all of the virtues of either of these valuable drugs. We are surprised that he omitted mention of cannabis, the third standby of the conservatives. Still more are we surprised that he includes ipecacuanha, nux vomica and cinchona. The isolation of the active principles from these three plants and their use singly has afforded such nice discrimination in their adaptation to the desired objects, that we can only infer that the writer has not paid much attention to the reports on these remedies. He follows the usual custom of refusing to admit that any one of the glucosides of digitalis as yet isolated fills the place of the crude plant. In this we know he is mistaken; but so few Americans have employed the Germanic digitalin outside of the alkaloidal group, that we rather expect to hear such a view expressed.

Altogether the editorial is a notable example of the steady gravitation of professional sentiment toward the active principles. At first there was nothing too mean to be said of them, but this opposition is moderating and something like a fair discussion of their merits may be noted. The result is not doubtful—really the parties now consist of those who admit that the alkaloids will come and those who assert that they have already come.

Mark this which I am going to say, for it is as good as a working professional man's advice, and costs you nothing: It is better to lose a pint of blood from your veins than to have a nerve tapped. Nobody measures your nervous force as it runs away, nor bandages your brain and marrow after the operation.—Oliver Wendell Holmes.

HAS EHRLICH FOUND A CURE FOR SYPHILIS?

What promises to be the greatest discovery in medicinal therapeutics since the introduction of quinine has recently been made by Professor Ehrlich, director of the Royal Therapeutic Institute, Frankfort, the well-known author of the side-chain theory of immunity. For several years Ehrlich has been endeavoring to find remedies which will strike at the specific causes of infectious diseases, by destroying the microorganisms outright and rendering the body "sterile," so far as these bodies are concerned. This work has been carried out along strictly scientific lines, so that the "discovery" just announced is in no sense empirical but rather a constructive one, being the apparent solution of a carefully set problem.

This new syphilis remedy is the joint work of Ehrlich and his Japanese assistant, Hata. It is an arsenic preparation, somewhat similar in its nature to atoxyl, but said to be free from the poisonous and sometimes dangerous after-effects of that substance. Chemically it is dioxidyamidoarsenobenzol. Thus far it is known simply by its laboratory number as "606." It has not yet been placed on the market, and probably will not be until the number of cases treated experimentally in the German hospitals and clinics is sufficiently large to supply data essential for its in-

telligent use. Wechsellmann has already treated 2500 cases.

The clinical work with the new remedy was placed by Ehrlich in charge of Professor Wechsellmann of Berlin, who made his first report at the meeting of the Berlin Medical Society (Berliner Medicinische Gesellschaft) on June 22 last. The results reported by him and other investigators, leaders in the German medical world like Michaelis, Alt, Schreiber and Neisser, are startling to say the least. No wonder, as *The British Medical Journal* says, that at the conclusion of the reading of his paper "a storm of such genuine and long-continued applause broke forth as has hardly ever been heard in this matter-of-fact and skeptical society."

Apparently "606" cures syphilis, and not after a prolonged course of treatment, as with mercury, but at a single injection. Within twenty-four to forty-eight hours improvement is usually noticeable in the earlier stages; within ten to fourteen days the patient is apparently cured, as shown by the disappearance of the spirochetæ, the specific cause, from the body of the patient, and by the fact that the Wassermann reaction becomes negative. In all cases this reaction is resorted to before treatment is begun, to verify the diagnosis.

No. 606 has been used in all stages of the disease, from the simple chancre to the most virulent forms of malignant syphilis; in the ordinary syphiloderm and in advanced brain lesions. It seems to be effective in all, though naturally more rapidly so in the earlier stages of this protean affection. The German investigators report case after case of the most severe forms of the disease which have yielded almost magically to this agent—many of them cases in which the classical methods had been tried and found entirely wanting.

The remedy is given both by intramuscular and intravenous injection. The intramuscular injection is generally painful, sometimes severely so, the pain persisting anywhere from several hours to several days. Recently the mode of preparation has been changed somewhat, so as to obviate some of the discomfort. When used intravenously the

remedy is painless. The dose used varies from 0.2 to 0.7 Gram (3 to 10 grains).

The percentage of immediate successes reported varies from 40 to 100. The opinion seems to prevail that the few failures were due to insufficient dosage. Usually where the first injection was not followed by a negative Wassermann, this was obtained following a subsequent injection. The fact seems established that given in sufficient dosage there is at least a temporary cure of the disease, and if the spirochete is actually destroyed, as seems to be the case, the cure should be a permanent one.

The remedy has been in use only about four months, so it is too early to assert that permanent cures are effected by it, but there is certainly excellent ground for believing that this is the case. Certain it is, however, that a single injection of "606" will do more for a syphilis patient than months of treatment with mercury.

The sociologic importance of Ehrlich's discovery is almost beyond computation. It brings to the foreground the possibility of absolutely wiping out the "black plague" of syphilis, the father of infection, the ancestor of physical degeneracy, the scourge of new races, the destroyer of old civilizations. Quinine opened the tropics to the conquest of the white man; "606" may have even greater conquests before it.

The burro when he sings may be quite as happy as the lark, but the general effect is quite different.

—Charles Eugene Banks.

THE ETIOLOGY OF PELLAGRA

Dr. L. W. Sambon, lecturer at the London School of Tropical Diseases and the Royal Institute of Public Health, London, at present investigating pellagra in Italy, announces from Rome the theory that pellagra is caused by the bite of a species of midge, or black fly, the simulium pipens, and that it thus falls into the class of tropical or semitropical diseases of insect conveyance.

If this announcement is verified, it affords a possible explanation of the sudden occurrence of pellagra in our own country, or at least its more general recognition in recent

years. It has been assumed by some students of the recent outbreaks that cases had existed unrecognized for a number of years, for instance in the asylum population of the corn-raising districts. This may be true, but it is hard to see how so marked a disorder could have passed unnoticed, at least in its typical form, for any length of time.

Dr. Sambon's announcement opens up a new field for American investigators of the subject. It is particularly important in view of the fact that in a number of cases reported in this country the connection of the disease with a corn-diet could not be established. We shall print a full description of the fly as soon as it may be available.

We are all trying to build concrete foundations under our air-castles.—David Gibson.

LAY TEACHING CONCERNING DISEASE

In glancing through our lay exchanges I have just come upon an article, in *Physical Culture*, on "Diphtheria, Its Causes and Its Remedies," written by Bernarr Macfadden. The following paragraphs immediately attracted my attention:

Do not encourage the child to stay in bed. The idea that the child must remain in bed simply because there has been a diagnosis of diphtheria in its case is a terrible mistake. In previous articles I have called attention to the harm that is done by impressing children with the seriousness of their complaint. It is far better to follow the opposite plan. No matter how serious the child's condition may be, he should be made to think lightly of it. The child should not be kept in bed with diphtheria unless there is a desire on its part to remain in bed. It should be encouraged to be up and around. And as for draughts, the patient should actually sleep in a draught, so far as possible. The oxygen of the outdoor air will very materially benefit this complaint. In fact, the outdoor treatment, in connection with the other treatments that are advocated here, would be of very great advantage.

Remember that drugs are of not the slightest use, and that antitoxin is dangerous, and is not in any case necessary; that diphtheria is not a dangerous disease unless it is made so by the method of treatment that is employed; that as a rule the severe symptoms of the complaint will disappear in a few days if you treat it in accordance with common-sense methods.

This man is wofully, disgracefully, dam-
nably ignorant—and yet he presumes to give instruction to the people on the treatment

of that dread disease, diphtheria. It is quite evident that he knows absolutely nothing about it; in all probability he has never seen a single case. If he had, how could he write of it in this light way, and with such complacent cocksureness, the indelible pock-mark of the fool.

I presume there is hardly a physician who reads these words who could not tell of one case (yes, some of a score or more of cases) of *mild* diphtheria, that were treated as simple sore throats, by the folks at home, on exactly the same lines so confidently recommended by Macfadden, and in which they were called in just a little too late; the patient was "getting well, aye, was well"—but was permitted to sit up or to play around the house. Then came the sudden attack of heart failure—utterly unexpected—and sudden death. "The doctor came too late to be of any service."

In no acute disease is the likelihood of heart complications greater, or absolute rest in bed during the attack, as well as during convalescence, more imperative. In none can the physician feel more certainty of saving life if he is given an even chance in the race with death.

Would to God that these grossly and cruelly ignorant quacks—for they are nothing else—could be forced to sit by the bedsides of the victims of their teaching, so that they could appreciate to the uttermost its full significance.

DRUGGISTS—A REFRESHING CONTRAST

Standing in refreshing contrast with the resolutions proposed by *Notes* for the action of the Association of Retail Druggists at its Pittsburg meeting, the middle of September, to which we have alluded in preceding issues of *CLINICAL MEDICINE*, are the resolutions adopted by the American Pharmaceutical Association, at its last meeting, in Richmond. These are as follows:

RESOLVED, That we recommend that any movement for the reform of medical practice be allowed to originate and proceed within the medical profession.

FURTHER, That we are opposed to any attempt on the part of the pharmaceutical press to dictate or compel any such reform, believing as we do that

the medical profession is qualified to institute and carry out its own necessary reforms.

The American Pharmaceutical Association is an old, honorable and efficient organization, which for years has been endeavoring to raise the professional and scientific standing of our pharmacist brethren. This body has fought for and secured the enactment of proper laws governing the practice of pharmacy; it has brought about a higher standard of pharmaceutical education; it has encouraged research of a high order. In a word, it has stood and still stands for all that is best in pharmacy. The members of this Association are generally cultured gentlemen who have the respect and confidence of physicians, and deservedly so, because of their professional abilities.

Compare this broad-minded and tolerant attitude with that of the N. A. R. D.—or rather with the attitude of its management, for we do not believe that it reflects the feeling of retail pharmacists generally, or at least the best element of the retail drug trade. Read the following, clipped from the Pre-Convention number of *N. A. R. D. Notes*:

MEDICAL SELF-DISPENSING MUST GO

Keep your eye on Pittsburg. This is the year and Pittsburg is the place where the evil of medical self-dispensing is going to get a blow between the eyes that will make it reel and from which it will never recover.

Propaganda has educated both the physician and pharmacist to a realizing sense of the injustice of the jughanded legal situation which compels the pharmacist by law to refrain from diagnosing and prescribing and does not prohibit compounding and dispensing by physicians. Common sense and common justice as between doctor and druggist demands that the law shall place restrictions around the physician that will be as effective in keeping him to his own field as those which the law now places around the pharmacist in keeping him out of the physician's field, or, failing to do this, to repeal the restrictive laws we now have applying to the pharmacist.

Note the veiled threat in the last sentence. Although this is qualified by a comment upon the impossibility of moving back the hand on the dial of time, the threat is there. Compare, I say, this position with that taken by the American Pharmaceutical Association, and do not forget that the N. A. R. D. has at least a moral alliance with the American Druggists Syndicate, which openly con-

fesses to stealing physicians' prescriptions to be made over into nostrums to be sold to the laity, and has entered into an alliance, through its president and editor, with the Christian scientists, the antivaccinationists, the osteopaths, the antivivisectionists, and prominent representatives and defenders of quackery, in the so-called National League for Medical Freedom.

The American Pharmaceutical Association stands openly and boldly on the side of the medical profession. It recognizes the fact that the interests of the two professions can only be made one through the high quality of the service which each renders to mankind.

The National Association of Retail Druggists has aligned itself with the patent-medicine interests, with irregulars of all kinds, with the religiomedical sects, with quackery—and now it threatens the medical profession.

The great question of the hour is the canal question.

Panama?

No, alimentary; how to keep traffic passing through it—at present food prices.—Bulletin of Pharmacy.

PHYSOSTIGMINE AFTER ABDOMINAL OPERATIONS

Brooks H. Wells, in *The American Journal of Obstetrics*, states that after abdominal sections, before the patient is taken off the table, she is given a hypodermic of physostigmine salicylate, gr. 1-40, and atropine sulphate, gr. 1-120. This is found to have a very positive effect in relieving postoperative pain and nausea, in promoting intestinal peristalsis, and in preventing shock. To get the best effect it should be given before the patient is taken from the operating room. When it is used, morphine is seldom needed for the control of pain. The dose of physostigmine is seldom repeated and should not be given more than twice more, at four- to six-hour intervals, in doses of 1-60 grain.

In using this drug it should be remembered that it is easy to give an overdose and paralyze the intestinal coats by overstimulation and so do serious harm. It should also be remembered that in actual obstruction it is

dangerous. Given in the doses mentioned, with the precautions noted, he has never seen any ill effects, and the testimony of the house-staff is unanimous that the patients to whom it is given suffer less, have less nausea and less abdominal distention than others. Patients usually pass from anesthesia into quiet for several hours. If then they are restless, 1-8 grain of morphine usually suffices. When the stomach will easily retain it, sleep and freedom from pain is often thus secured by giving in place of morphine 8 grains of aspirin with 5 grains of veronal.

I hold every man a debtor to his profession; from the which, as men, of course, do seek to receive countenance and profit, so ought of duty to endeavor themselves by way of amends to be a help and ornament thereunto.

—Francis Bacon.

LOOK AFTER THE UNIT—THE INDIVIDUAL DOCTOR

A St. Louis reader of CLINICAL MEDICINE has brought vividly to our attention Dr. James H. Farber's article in *The Lancet-Clinic*, entitled "Practical Thoughts." While we always scan the pages of our live Cincinnati colleague, we might have missed the milk of the coconut in this strong article without that reminder, since the title does not quite suggest its central idea, which is, the importance of stimulating our organizations to a recognition of the duty that they owe to their individual units, to each and every physician. As Dr. Farber says: "If there is or has been a profession where every man is for himself 'and the devil take the hindmost,' the medical profession is that one." This is so true that it needs no discussion; and so is that other statement of Dr. Farber, that "organization has long been a necessity for any great purpose, and organization for the personal needs and welfare of its units is the acme of common sense."

We shall not attempt to present an analysis of the doctor's paper, one which deserves careful reading by every physician interested in the economics of the profession, and that should mean every one. To be frank, however, we believe some of Dr. Farber's pro-

posed remedies impracticable, as for instance his suggestion of a chain of medical colleges to be owned by the profession itself. Nevertheless his premises are sound.

Through our national organization we have been seeking to do good to practically everybody *except the doctor*. The multiplied efforts to prevent disease or to stamp it out, to raise the standard of admission to the profession, to improve the character of our colleges, to secure better drugs and other agents for the cure of disease, and to extend the facilities for cure open to the sick poor, are all praiseworthy and desirable—but *what is being done for the doctor?* That, as a class, he is getting poorer no one can deny. He is subjected to abuse and misrepresentation, not only in the growing horde of vile sheets which fatten on the lies that they can concoct about doctors or an imaginary "medical trust," but also even in the newspaper press, which is always ready with innuendos. The doctor is being robbed on every side. Even our friends the druggists (they should be our friends—and I believe they mean to be) want to get their hands on the doctor's flattened pocketbook.

It is high time for the American Medical Association to begin a new campaign, one directly and unequivocally in the interest of the rank and file of the profession.

Let it come into the open and fight the men who are fighting the doctor. Let it give blow for blow, and meet falsehood with truth.

If an attack is made upon our purse, let it make the reprisal of stalwart manhood.

Let it combat with all its undoubted power the constant threats of unfriendly and repressive legislation. Let it secure the support of the courts to protect our rights.

Let it fight against the extension of charity practice, and demand from the municipality or the state proper remuneration for work done for those unable to pay.

Let it continue its excellent work for higher medical standards, and strive to curtail the overcrowding of the profession.

Let it secure uniformity in practice-laws, so as to provide for equality of opportunity between doctor and doctor.

Let it begin a campaign of publicity regarding the medical profession, designed to rehabilitate it in the hearts of the people.

A campaign of this kind, conducted along broad, generous, mutually helpful lines, would do more than anything else to bring the entire profession together, and to make it a fighting force for the common good.

Is the goal distant, and troubled the road,
And the way long?
And heavy your load?
Then gird up your courage, and say, "I'm strong",
And keep going.

—Ella Wheeler Wilcox.

PIONEERS AND THEIR WORK

Here and there in the outskirts of the great city we come across places where some adventurous builder has begun the construction of a tenement. The cellar has been excavated, perhaps the basement erected, and then the work has stopped. The builder's money ran short, or he became doubtful on the prospect and called off his men. Time passes; the half-built walls crumble or are carried off, weeds cover the unsightly heaps, until in the course of time the city grows out to and over the locality, and the edifice is completed or rebuilt.

Science has many such monuments of the enterprise of individuals that has out-run their means and discretion. Many an adventurer has left his bones to be buried in the wilderness, to be unearthed years later, when the pick of the railway builder demolishes the moldering remnants of the edifice into which his hopes were built.

In no department of human endeavor do we find more examples than in medicine. The doctor is essentially conservative. He is not of this pioneer breed, but of that which sits tight in his father's halls, and lets the other fellow go out into the wilderness to encounter savage men and still more savage nature. He is content with security and will not risk a little for the chance of winning much. Such men, in primeval days, objected to wearing clothes, as an indication of degeneracy, and told the story of Eden to illustrate their protest. They looked with lofty contempt on the churl

who forsook the free range of the desert and settled down to till the soil, and the tale of Cain and Abel voiced their prejudice. They formed a part of that stubborn Matter which the gnostics constituted the principle of Evil, and with which the emanations from the God united to create this world of mixed good and ill. They yet constitute the too often impenetrable obscurity which will not be pierced by the light, the insuperable obstacle which will not be overcome by the man who seeks to bring down the celestial fire to comfort his fellowmen.

Cullen urged his brethren to administer remedies singly, that their effects might be more accurately estimated; but his words fell on unheeding ears. Every great clinical therapist since has urged the same course, but only the greatest appreciated the importance of the matter. Trousseau gave strychnine alone in epilepsy, pushing the doses to effect—and obtained results which the masses utilized by adding a little nuxvomica to their prescriptions. Niemeyer even drew the line between the applications of the infusion and the tincture of digitalis, foreshadowing the coming era of single active principles, as he did that of the tubercle bacillus; but his shrewd observations are forgotten. Weir Mitchell demonstrated the curative power of the *exclusive* milk diet in nephritis, and every textbook today advises that milk enter largely into the diet.

To obtain definite results the students of experimental therapeutics were compelled to discard the cruder preparations and employ the single active principles in chemical purity, and then they used the data to direct the application of the old crudities. It never seemed to occur to them that certainty, precision, might be of value in direct remedies for treating the sick human as well as in experimenting upon dogs and coneys.

Da Costa was not only a master of diagnosis but an accomplished therapist, and he made many applications of pure active principles administered singly. The specialist, in treating diseases of the eye, uses the active principles singly, almost exclusively, and yet even he is liable to desert atropine for belladonna, strychnine for nux,

when he seeks to treat the rest of his patient's economy. This is somewhat because he does not know the rest of the body and its diseases as accurately as he does the eye, but mainly because of no better reason than habit.

The modern surgeon is strictly a single-remedy and active-principle man. What few drugs he employs are directed for clearly comprehended needs. He gives quinine, strychnine, morphine, physostigmine, and atropine for septic fever, adynamia, pain and insomnia, intestinal torpor or hemorrhage. He takes no chances on uncertain crudities; he knows what he wants too clearly to employ shotgun mixtures. So far as he goes his therapeutics is admirable, but he does not go near as far as he might. He has not yet realized the control exerted over erysipelas by pilocarpine, over suppuration and infection by the sulphides, over fever by aconitine and veratrine, over spinal irritability by cicutine, or a hundred equally positive applications of drugs to control disordered functions. But so far as he goes his therapeutics is much better in quality than that of the average internist.

EXCELLENT RESOLUTIONS

Following are some resolutions passed by the Philadelphia Association of Retail Druggists, which has begun a much-needed campaign against the traffic in habit-forming nostrums.

WE, Members of the Philadelphia Association of Retail Druggists, realizing the danger to public health by the indiscriminate sale by us of habit-forming drugs, when present in proprietary or patent medicines, especially that class of prepared ones included under the "soothing sirups" and "comforters" designed for the use of infants; also appreciating the earnest efforts of the director of the department of public health and charities of Philadelphia to limit the sale and use of these dangerous preparations,

RESOLVED, That members of the Philadelphia Association of Retail Druggists discourage the sale, unless ordered by a physician on prescription, of any proprietary or patent preparation containing these habit-forming drugs; and also

RESOLVED, That this association commend Dr. Joseph S. Neff, director of the department of public health and charities, for his earnest efforts to prevent this indiscriminate sale and use of such dangerous preparations, and the members of this

association give the department every possible aid and encouragement in this excellent work.

These resolutions can not be commended too highly. They are right! They are humanitarian! Of all the "patent" medicines those certainly are the most insidiously dangerous which instil the appetite for narcotic drugs during the susceptible periods of infancy and childhood. It is the plain duty of the physician to point out this danger on every possible occasion—and, as the result of splendid work already done, the people are beginning to understand its reality:—but it certainly is gratifying to feel that the drug trade is now taking a hand in the fight. These Philadelphia resolutions should be brought to the attention of our pharmacist brethren everywhere.

Think what it would mean if the billboards of the land and the newspapers and magazines should all, carry a daily message regarding the prevention of disease, the folly of intemperance, the value of certain foods, the possibilities of thrift, the citizens' duty, the iniquity of land speculation, or some other educational message to millions of people.
—David Gibson.

A BAS THE PUBLIC DRINKING CUP

The Cup Campaigner is a militant little paper published at intervals by persons striving to banish that most prolific medium for spreading disease, the public drinking cup, containing authentic reports of the rulings of health officials, the growth of public sentiment through the press, and other developments of the crusade. It is edited by Hugh Moore, 115 Broadway, New York City. The August number, which is No. 2 of Volume 1, contains several lurid cartoons which have appeared in various daily papers and Board-of-Health publications, illustrating the harmfulness of the public drinking cup.

It is, indeed, high time that this more than a nuisance should be abolished. Not only has the public drinking cup been shown to be an important factor in the spread of tuberculosis, diphtheria and scarlet-fever, but more especially are the venereal diseases communicated with great frequency through this medium of disseminating disease. We wish this little publication every success

and trust that the means of continuing it will never fail.

THE UNITY OF THE ORGANISM AND POSITIVE MEDICATION

Charles H. Hubbard, writing in *The Hahnemannian Monthly* for August, very forcibly illustrates the importance of exercising a true perspective in the treatment of our cases. He illustrates his position graphically by the expression of an ophthalmologist who replied to the request to prescribe for a hepatic disorder in an eye-patient, "I treat eyes, not livers."

The author aptly points out that no part of man's organization can be separated from its associate union in the human economy without disturbing somewhere, somehow, and in some degree the normal equilibrium of that organization, and that thus it must necessarily follow that no part of man's structure can exist and function in its highest development and perfection wholly independent of its organic relationship; that every individual atom or ion of the human body has a vital relationship with every other atom or ion, and that, hence, no disturbance can occur in one atom without derangement in some other atom or atoms. It is, therefore, logical to conclude that, whatever means are employed for the cure or relief of a malady without regard to its location or character, must affect other structures than those presenting symptoms for which treatment is instituted.

The important truth of these statements is all too forcibly illustrated in the frequent untoward and undesirable action of drugs that are administered for a definite purpose and with a view to obtaining certain selective effects upon some organ. It is important to know, not only the selective action of a drug upon an organ or a set of organs, but also to investigate and ascertain a possible action upon all other organs and upon the entire metabolism of the body. Only in this manner can we succeed in positively circumscribing the definite effect of drugs upon the organism, and only in this manner

can we be enabled to use drugs deliberately and for positive indications.

All too often drugs are given as though shot from a blunderbus, nor does this apply to the "shotgun" prescription alone but quite as forcibly to single remedies or to limited combinations of remedies when administered without any definite knowledge of the results, immediate and mediate.

We wish to add to these thoughts, that it is to the practitioner, to the man in the field, to whom we must look for information concerning the remote action of drugs, and it is to his observation that Medicine perforce must owe its ultimate knowledge of the possibilities of drug-treatment in every particular instance.

J'ecris comme je pense, et ecrit comme je crois; voila mon secret.—Burggraefe.

OLD AGE AND HOW TO ATTAIN IT

Lorand has recently published a small volume upon old age, the means of preventing and of combating it, a notice of which appears in the current number of *Le Mois Medical*.

The possibility of men living to become one hundred years old has been demonstrated by numerous examples. Their judicious modes of life ought to be an example to those who desire to imitate their longevity. A good constitution is assuredly an important factor; nevertheless, persons of feeble constitution through their mode of living, have attained an advanced age and have transmitted to their descendants a constitution of better quality than their own.

Lorand's work is divided into twelve chapters, advocating the following maxims:

1. Live as much as possible in fresh and healthy air, especially in the sunshine, provided it is not too hot.
2. Eat meat but once a day and moderately. Let the diet be composed principally of milk, eggs, cereals, green legumes, butter, cheese and fruit. [I would object to the cheese, which should be taken in very small quantities, on account of its very high nitrogenous percentage and its tendency to constipate.]

3. Take care of the skin, and each day take one bath.

4. Go every day to the closet. Cleanse the bowel once a week by the aid of a mild purgative.

5. Dress in porous clothing, especially of wool; wear shirts with loose collars, and low shoes. Select, in summer, a hat and clothing of light color, in winter preferring darker tints.

6. Go to bed and rise in good time.

7. Sleep with the window open, in a bed-chamber dark and quiet. Do not sleep less than six and a half hours or more than seven and a half, eight and a half being the limit for a woman.

8. Rest perfectly once a week, passing the period from Saturday to Monday in the country or in the mountains.

9. Avoid moral shocks, the cares and excitements of the spirit.

10. Be moderate in sexual indulgence, but do not suppress this instinct entirely.

11. Avoid localities badly ventilated or overheated.

12. Use alcohol, coffee, tea and tobacco very moderately.

If there is any excuse for even the most moderate use of alcohol it has escaped my observation entirely. As for tea and coffee, it depends upon the individual, and I should say the same as regards tobacco. With some persons tobacco seems to be of advantage in certain directions, but I believe these substances should be employed only upon the prescription of the physician, who thoroughly comprehends their direct and remote action and their applicability to the case in question. As to their general use, speaking of men and women in general, I would say that longevity is enhanced by abstinence from all four.

These twelve maxims are important and interesting, yet they do not by any means cover the entire field. Scarcely anything is said of exercise. I firmly believe that the continuance of active habits prolongs longevity and certainly prolongs the happy and useful period of one's life. Many times in my experience of more than forty years as a physician I have found cases where sisters

or brothers, similar in all respects excepting that one continued the active habits of life while the other subsided into slothfulness as years advanced, gave instances of the sort to which I refer. In every one of these the active one enjoyed life and lived longer than the indolent one. Though overwork and deprivation shorten life, I am sure that reasonable physical exertion and abstinence rather than overindulgence in food and drink tend to prolong the years.

The subject might be prolonged with interest and benefit indefinitely, for what, after all, is the greatest specialty in the practice of medicine but the art of prolonging life? And he who in studying his various specialties holds above and as comprising all of them the art of prolonging the life of his patrons, by health, comfort and happiness, after all is the ideal physician.

Read the articles on "Senility" which Father Epstein, our eighty-two-year-old youngster, is translating for you in the "Gleanings" department.

One word of well-directed wit—
A pebble-jest—has often hit
A boastful evil, and prevailed
When many a nobler weapon failed.

PURE UNADULTERATED "FUN"

The Pacific Pharmacist tries to be funny, and succeeds, though in an unintended way. This curious paradox may be explained by referring to the July number of that interesting periodical, page 149. The editorial is headed, "It Is to Laugh." The editor, acting upon the presumption that he knows as much as any doctor does, and a good deal more besides, undertakes to be exceedingly amusing at our expense, quoting from a paper in a recent number of *CLINICAL MEDICINE*, giving the components suggested for a physician's emergency case. We physicians of course know that in making up such a case it is necessary to employ a few remedies which can be used for all ordinary emergencies likely to come to the doctor, in some of which the utmost haste is necessary in order to save life; and that for this purpose

it is necessary to have remedies which act with quickness and precision.

The editor becomes merry over a "remedy for drowning." Well, if anybody is in danger of drowning, wouldn't the doctor be called, and if so, as long as life is in the patient, would he not try to save that life? Very well! I defy that funny editor or any druggist in creation to find a remedy so perfectly suited to retain the life as the combination of glonoin, hyoscyamine and strychnine, here recommended. The gentleman evidently is laboring under the presumption that the remedy is suggested for use on the drowned, but surely it is hardly necessary to go so very far to make a joke.

Further on he illustrates still better the druggist's limitations, where he criticizes the suggestion of the same combination for use in sunstroke. "Sunstroke," to the editor, means but one thing, which is that affection characterized by very high temperature, for which the article which he garbles and distorts very properly suggested the vascular sedatives, veratrine, aconitine and gelseminine. But under this term is popularly included another and very different condition which we physicians generally term "heat exhaustion." Since both are treated in the textbooks under the name of sunstroke, and since every physician knows perfectly well how to separate the two, we felt confident we could leave to our readers' intelligence the task of determining, without being told, what form of the malady popularly termed sunstroke is thus treated by vascular sedatives, and what forms require the tremendously powerful stimulant combination mentioned.

The article was not written for the laity. Had the editor of *The Pharmacist* submitted the matter to a physician, he could have secured the information he lacked.

The incident serves to remind us of the fact that the late Prof. Searby is no longer director of *The Pacific Pharmacist*.

BEAUMONT, FATHER OF DIGESTIVE PHYSIOLOGY

The Montreal Medical Journal for August, 1910, contains an interesting account, from

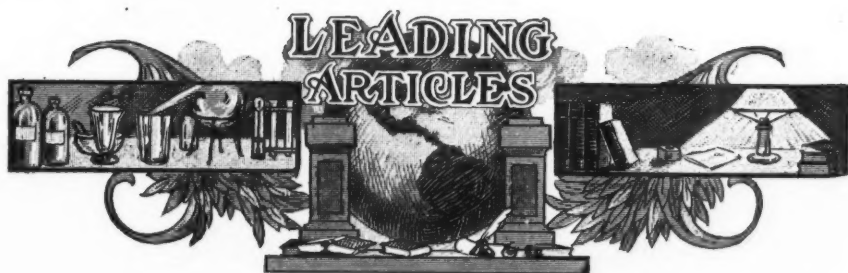
the pen of Dr. Monahan, of Dr. Beaumont and his classical investigations, or human experiments, on Alexis St. Martin, first published in 1833. We are particularly interested in reading Dr. Monahan's paper because we are so fortunate as to possess in our library a copy of Beaumont's book, which is entitled, "Experiments and Observations on the Gastric Juice and the Physiology of Digestion, by William Beaumont, M. D., Surgeon in the U. S. Army, Plattsburgh. Printed by A. D. Allen, 1833."

Beaumont's investigations are of importance, not only because they demonstrate the physiology of digestion, but also because they illustrate the possibilities in the way of research work on the part of the practising physicians and because further, they form one instance of many in which a comparatively unknown general practitioner has served the cause of medical science in an inestimable degree.

Such men as these have been frequent, and in addition to Beaumont himself, we need only recall that Dr. McDowell, who performed the first ovariectomy, was a country practitioner; that Marion Sims was also a practising physician; even Robert Koch was practising in a small town when he laid the foundation for his epochal discoveries. Louis Pasteur was a simple country doctor when he first conceived the idea of his future researches in the realm of the causation of disease.

And so we might go on enumerating instance after instance, every one of which should serve as a stimulus to our readers and to physicians generally to investigate and study and observe closely, because it is the careful and full observations of the clinician which enable us to draw the balance between theoretical deduction and experimental results.

While few of our readers will become Beaumonts, McDowells or Sims, many might be contributing things of undoubted value to medicine and mankind. There are thousands of half-uncovered discoveries which need but the light of day to have their merit recognized; many things which need but an added hint here or a suggestion there to make them of service to the world.



What Experience Has Taught Me

*A Physician Who Has "Made Good" in General Practice Tells of
the Things that Seem to Him to Count Most*

By C. F. WAHRER, M. D., Fort Madison, Iowa

AN honest answer to your request to write something for the readers of **CLINICAL MEDICINE** on the subject of what contributed most to my success as a physician would at first look like a certain amount of egotism, unless you were sure that my professional life really was and is a success.

The fact that I have been president of several medical societies, among them of the Tri-State Medical Society and my own State Society, and have held offices in the American Medical Association, may have given you an exaggerated idea of my worth as a medical man. However, whatever the real merits of the case may be, I should attribute this success to several factors, as follows:

Have Faith in Yourself

First of all I will say that in whatever I undertake I am in earnest, and pursue my object in a conscientious and persistent manner. In addition to this, I have a certain amount of confidence in my being successful in what I have undertaken. Not that I always achieve what I undertake—far from it; but that is what I try to do, and that is half the battle. Of course by this I don't mean that one must have a blind, foolish faith in one's self; but one must have some reason why he expects to

win or to lose. Preparation for one's life-work must be presupposed. Reasonable objects must be your pursuit. Chimerical things, such as perpetual motion, or the transmutation of the baser metals into gold, or the building of some tower of Babel, are not included in the category of the reasonable objects of success.

Next, honesty of purpose and honor in dealing with our fellow men are other factors of professional success. This is disputed by some, but I hold that honesty and honor are the chief factors in real success.

Material success is not all one has ambition to achieve. Respect for one's self, for one's own, for one's home and country, for the society to which we belong, all these and more must be reckoned with.

The Value of Common Sense

Possessing the rare gift of common sense is another and most valuable factor in success. I presume those who do not have this—and some do not—cannot be held responsible for its absence, any more than for the absence of beauty, or stature, or any other mental or physical possession. But he who has it is most fortunate, if he makes use of it.

Common sense is the basis of judgment. In many things in life we have no absolute

rules, so in these cases we must let our judgment be our guide. The results will show whether our judgment was good or bad. In the practice of medicine this is as often our only guide as the many rules we have for our cases. And when the usual rules and our good sense come in conflict, it is safer to let our judgment guide us rather than the printed rules.

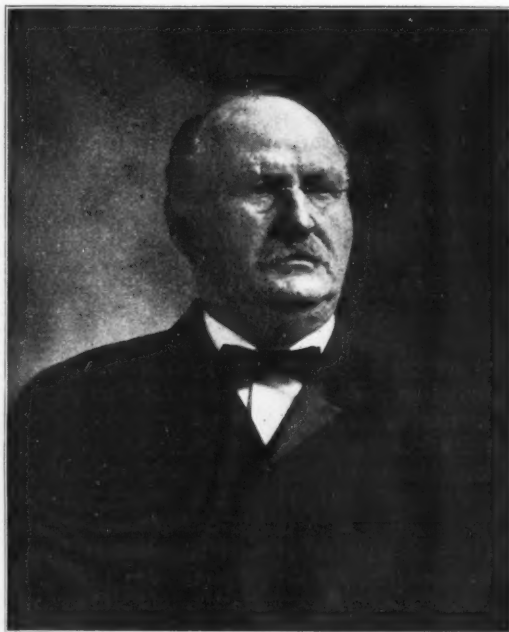
For this reason it happens at times, though not often, that the more unlearned man, with the better and cooler judgment, succeeds where the bookworm with all his college learning fails. But when scientific training is coupled with good sense, then we have team-work of the most desirable kind. When the Bergeron treatment for consumption first came out, I could see no sense in it, and so never made an effort to try it on my patients. Later experience proved my judgment good. The same has held true with other fads. But when I was presented with the principles of alkaloidal medication, I at once recognized its basic truths and accepted as much of it as was applicable to the cases in hand, and have had no cause for regrets up to this time.

Pope's maxim,

"Be not the first by whom the new is tried,
Nor yet the last to lay the old aside,"

is especially true in medicine. With our Carnegie laboratories, and our Rockefeller

research institutions, we have no need to make dangerous experiments on our patients, which, if they do not prove disastrous, yet yield us no positive results, while our patient's time is wasted for naught.



DR. C. F. WAHRER

Another factor in my sum of success lies in the fact that I never advocated with especial violence any bizarre forms of treatment or fads. I have always held that, as a rule, the great truths lie somewhere among the masses, and not with isolated individuals. While there are some notable exceptions to this, yet in the main the course I have adopted generally proves the correct one. Here again one's common sense

will help to decide should a dilemma arise.

I said, in the beginning, that I am always in earnest. Now, I do not mean the serious earnestness of the owl or of his more learned cousin, the ass, and if by this my readers infer that I never smile, they are mistaken, because I smile a great deal; in fact I laugh still more, as I see a great deal to laugh at, and I seldom repress the temptation. I never laugh at funerals, nor cry at weddings, nor behave like an encyclopedia at a medical banquet, as such behavior doesn't appeal to me. I believe in joy and happiness, and am sure I have made many a mourner glad, made many a face to smile, even when discussing grave and sleepy medical themes, at the usually somnolent medical society, so much so, that some of my anxious friends

have expressed the serious fear that I lack dignity.

So far as we know, man is the only animal that can laugh, so I think he should not miss the opportunity to make use of his monopoly when the proper occasion presents. Therefore, it is not by being too serious that I manifest my earnestness.

A Way Not to Seek Success

Another way in which I do not court success is in seeking it in the membership of churches and lodges. Though I am all kinds of a Mason, an Odd Fellow, a Shriner, and a Presbyterian, and then some, I do not believe any of these will add one dollar to my income nor the least of prestige to my standing as a medical practitioner. These organizations systematically fleece one off the money obtained from other legitimate sources, for their own use, and for the maintenance of the lame ducks and privileged characters in their memberships.

The only way to become successful is to make good in your profession. Pretenders may skim along on the surface and lean on their indulgent stronger brethren for a long time, but when the real man appears in their field there is but a short-lived term to their former popularity after that. I always have had before me the maxim, "Fools rush in where angels fear to tread," and this has kept me from the daring that makes so many apparently popular, and which so soon leads to downfall.

Thorough preparedness, followed by unceasing hard work, and this coupled with honesty of purpose and a desire to offer your patients an honest dollar's worth of service for his confidence and his money, will usually win anywhere. Making the sparks of a static machine raise the hair on your patient's head, playing the gynecologist by fingering lamb's-wool tampons daily for a year or two, playing the surgeon by approximate reductions of fractures and dislocations, lancing an abscess now and then, or opening an abdominal-wall boil and saying you have operated for appendicitis, all these will work for a while, till you meet the real thing and *can't* make good and some

other and more competent man does the work—I say, all this will not spell the success of which a man can be proud.

All these things I have avoided, and never have tried to do what I had not prepared myself for. It is no disgrace not to be able to do everything. But it is a sign of honor and character when you do well what you claim to do. The world will give you credit for work well done, no matter how limited your sphere.

I have made a reputation in some cases when I frankly stated that I did not know what ailed my patients. Of course that is not what is usually expected of a doctor, but it is a still more hazardous thing to pretend to know when you don't.

Supplying the Patient with Medicine

As regards my practice of providing the patient with medicines: I think it is best if one has the time to dispense most of his medicine, and for very obvious reasons. Most patrons like it best, and among the people of moderate means it means quite a saving and often brings the doctor money which otherwise would have gone to the druggist, as the people usually do not have two fees in their pockets. In some cases it is a question of getting to see your office patient but once in the one instance, or seeing him again when his supply of medicine is gone. I wish by this to cast no reflection upon the druggists, but my experience is that the average druggist is not doing business for the special purpose of looking to the doctor's interests, as he has other interests to look after.

In the selection of your drugs it will pay to get the best and purest, regardless of the cost, and then give them to your patient with a chary hand, as that will save you money and not litter up your patron's house with remnants of useless medicines, thus tempting the too economical to self-drugging with the "left-overs" they may find in their cupboards and bathroom closets.

See to it, also, that your medicines are palatable, compact and attractive. Avoid polypharmacy, both in the compounds you administer and also in the multi-

plicity of remedies you furnish any patient; in the first place it is not good practice, and, secondly, it causes thinking patrons to suspect that you are not sure of yourself. The alkaloidal remedies furnish you just such sure, safe, palatable and attractive medicines in the cases in which you may find them useful in your judgment.

In these few scattered remarks your readers may find the fundamental elements

of my success in the practice of medicine, and I trust that those who have been treading uncertain roads may find something to guide them in the thorny maze every physician must travel, no matter if his field of labor be among the effete rich, among the slums of the city, or at the traditional country cross-roads.

To all of you I wish Godspeed, good luck, and success.

The Old and the New in Medicine

By THOMAS G. ATKINSON, M. D., St. Louis, Missouri

EDITORIAL NOTE.—Not to "fight" disease, to seek to drive it out of the body as if it were an evil demon, not merely to observe and study it as if it were a foreign force, using the patient's body as an arena, but rather to look upon it "as a disturbed phase of the interplay of action and reaction between the organism and its environment," something to be overcome by the use of definitely active remedies that rouse the body to reaction, so that it can fight its own battle and better for our help—this is the modern conception of disease as outlined in this admirable paper by Dr. Atkinson.

IF the astronomer be asked to indicate a line of demarcation between the old astronomy and the new, he has no hesitation in fixing it at the introduction of the spectroscope. The development of this comparatively modern instrument and its application to the study of the heavens led the science of astronomy out into entirely new realms, and from that time on, instead of confining herself to a mathematical calculation of magnitudes, distances and motions, she undertook an investigation of the constitution and physical conditions of the stars and planets.

While it is probable that no such sharply defined, tangible line can be drawn between the old and the new science and practice of medicine, yet it is quite possible to demonstrate a set of concepts and methods and achievements which distinguish the new medicine from the old with just as marked a contrast as the spectroscope divides the two periods of astronomy.

Our Idea of Disease Has Changed

Doubtless the most fundamental difference—that which underlies all other differ-

ences—is the changed way in which we regard the nature and phenomena of disease. Indeed, there have been three distinct stages in the evolution of this conception of disease, and it is only now that we are beginning to grasp and act upon the perception that the truth lies, as it always does, midway between two extremes.

In olden times—and this, so far as medical science is concerned, does not necessarily mean so very long ago—the conception of disease was almost wholly a subjective one. Inasmuch as there were none but subjective means of recognizing disease, it was natural and inevitable that the mind-picture which men had of it should be correspondingly subjective. The only mode of its expression, as between patient and physician, being through the word-description by the former of the subjective effects it had upon him, it could hardly be otherwise than that the latter should come to regard the disease as being an aberration of the patient's subjective personality. And even though this subjective phenomenon came to be clothed with physical characteristics, so that it was no longer the mind but the body, in its various

parts, that was affected, still, it did not lose its essentially subjective character—it was still the patient that was sick within himself, with humors and cholera and the like, with little or no reference to the outside, objective universe.

The Dominance of the Objective in Disease-Study

With the advent and rather rapid development of objective instruments and methods of diagnosis there came a revulsion from the subjective viewpoint, and the pendulum swung to the other extreme. The swift and startling succession of discoveries, all indicative of the objective etiology and manifestation of disease, gave tremendous impetus to the pendulum's velocity, culminating in the enunciation of the germ-theory and the daring adventures of antiseptic surgery, which gave an ultraobjective cast to our conception of disease, and threatened to relegate the patient himself to the role of a mere passive battleground of contending forces, in whose struggle he had no personal part.

Of late, however, a saner and truer conception, formed out of the rational elements in both these former concepts, has begun to take shape and is fast dominating medical thought and action. Its most profound biologic significance is seen in the modern trend toward opsonic indexes, serums, vaccines, and the like.

Our latest, best, most scientific concept of disease is the same as our conception of health—that of a dynamic interplay of action and reaction between objective and subjective forces; a variation of the perpetual strife between the man and his environment, in temporary and sometimes lasting favor of the latter; a disturbed phase of a wonderful system of dynamic adjustment between the elaborate subjective phenomena represented by our ancestors' "humors" and the no less elaborate objective phenomena represented by the nineteenth century's materialism. So the patient on the one hand and his environment on the other have assumed their proper relationship—the subjective and objective

elements of disease have established each its own significance.

Therapy Modified by Our Conception of Disease

This evolution of the conception of disease was naturally attended by a corresponding evolution in the conception of therapeutics; and the one is exactly paralleled by the other.

Under the subjective idea, that the patient was sick within himself, that he "stewed in his own juice," so to speak, and that all the forces and elements of his disorder were circumscribed within the limits of his own body, it was inevitable that the influence of drugs should be overrated and their use distorted and overdone.

Since this idea of disease was based upon a similarly subjective idea of physiology, its therapeutics demanded the so-called "physiological" action of drugs. Reaction was unthought of. By this was meant the mechanical or chemical action of the drug, which, ignoring all dynamics as between itself and the disease, overwhelmed the affected organ or function as by a static force, and simply crushed it into submission or killed in the attempt. Of course this was not what really happened. Of course the procedure was tempered by judgment just as intelligent and discriminating as that which we now exercise, and under this so-called "physiological" system of therapeutics many effective cures were made. But such was the principle of the therapeutics of subjective medicine.

The recession of the pendulum to the objective concept of disease brought with it a corresponding revulsion of attitude toward drug-therapeutics.

What Is Therapeutic Nihilism?

If disease were but the clash of contending forces across the patient's body, of what use to pour medicines down his passive throat? To be sure, he suffered a stress from merely lending his person, as it were, to the staging of the conflict; but drugs could have no specific influence over such a condition. It was just a question, with a shrug

of scientific shoulders, whether the constitution of the patient would stand the racket of contending elements. If it did, he would recover. If not, he wouldn't. So, with the exception of a general tone-up treatment, and an occasional stimulant in crises, practitioners adopted a policy of "masterly inactivity;" and textbook writers got into the way of stereotyping the phrase. "Such-and-such is a self-limited disease, which can neither be aborted nor cut short by any known means at our command."

This is what we now call therapeutic nihilism. But for its prevalence, we cannot specially blame those who inaugurated it, since it was a natural and inevitable corollary of the then prevalent conception of disease. Those only are to be blamed who, in spite of more modern knowledge, still persist in their skepticism. "This is the condemnation, that light has come into the world, and men love darkness rather than light."

With the last, best viewpoint of health and disease came the deepest and truest insight into the real inwardness of therapeutics.

Disease, as it now appears to us, is not a thing of internal humors and cholers; nor is it the cross-play of external elements with the patient's body as their arena; it is, as we have seen, a disturbance of the balance in a perpetual play of action and reaction between subjective man and his objective environment.

There is, of course, the objective side to the matter; and in the broadest interpretation of the word, "therapeutics" is anything and everything that influences this objective group of forces must be included in the term. But in the generally accepted sense of the word, the man's end of the fight is the therapist's end. He may have a sort of negative office to perform in modifying the objective phase of the disease, but his positive, active work is to help the man. Only, with his modern, intelligent understanding of the nature of disease, he must help him, not by forcing internal and isolated functions, but by stimulating and reinforcing the reactionary powers of the man himself against his objective foes. In other words, under

the present conception of disease, we neither fight the man nor let him alone, but we help him fight the disease.

Our New Concern Regarding Drugs

So we are no longer concerned about what the drug does to the man, but rather in what the man does in the presence of the drug; we no longer seek the action of a remedy, but its reaction; we do not give it for its physiologic effect (so called), but for its dynamic effect. To be sure, that is its physiologic effect in our present understanding of physiology, which is also dynamic and reactionary.

This new principle of therapeutics has brought about many important changes in the practice of the art—for therapeutics is an art, albeit based upon science, much the same as music is foundationed upon the science of acoustics.

For one thing, it has changed our therapeutic valuation of many drugs—indeed of almost all those which were used under the old-time subjective system; so that we find ourselves now using morphine for a heart stimulant and mercury as a tonic, uses which would simply have staggered our fraternal ancestors. It has also enlarged the number and range of our therapeutic agencies; for manifestly, if by therapeutics we understand the stimulation of the organism to successful resistance of morbid invasion or derangement, every agent which has thus served to stimulate it, or which may reasonably be supposed capable of doing so, must be recognized and utilized as a therapeutic agent.

Furthermore, this enlargement of therapeutic possibilities has brought with it a correspondingly increased responsibility and need for intelligent discrimination. It admits of no rule-of-thumb treatment.

And here, I think, is where serum-therapy will fail by itself, unless it be reinforced by other treatment. *It is not action, but reaction, we are after;* and all organisms do not react in the same way to the same agents. Under the lash of the whip one man is stung to fresh endeavor; another sinks, fainting. In one a kind word arouses am-

bition; in another it pampers self-conceit. So with the measures and agents used in ministering to the body.

Nothing short of a thorough understanding of all the conditions, an equally thorough acquaintance with one's therapeutic armamentarium, and an intelligent application of one to the other will suffice the modern physician to meet adequately the situation.

The New Therapeutics—"Dynamic" Therapeutics

In the actual use and administration of drugs the new system of therapeutics—that which I have elsewhere ventured to christen "dynamic therapeutics"—has brought a few changes of considerable significance, and these are dependent upon, and grow out of, the dynamic principle.

First of these is the almost universal change from the multiple to the single remedy. By this is not necessarily meant that the physician nowadays gives but one drug in a disease, or even at a time. That is not the true inwardness of the single remedy. It is that, whereas the physician used to mix drugs up in a vague, overlapping, hit-and-miss combination, relying on the net resultant for the desired effect, now he carefully chooses each separate drug for a distinctive purpose, and aims each one, like a bullet, straight at the bullseye, expecting (and if he is a skilful therapist, getting) the total effect of them all. This is the method nowadays pursued even by those who persist in writing combination prescriptions. It is no longer the net resultant of the combination that they seek, but the combined totality of the units. And that is single-drug therapy.

It is easy to see that the single remedy is the only adequate or logical method of applying therapeutics to the new conception of disease and of the new system of therapeutics. Again, it is reaction, not action, we are after. It is perfectly easy, to be sure, to get action with a shotgun filled with grape-shot—and reaction, too, for that matter, of an incoordinate, purposeless kind. But intelligent reaction can be obtained only by placing single bullets, one at a time, with a

carefully sighted rifle, just where, and with just the force, one desires to hit.

The Basis of the Single-Remedy Idea

And it is this principle, and its growing recognition by medical men, and the increasing demand for its application, that is bringing out a supply of well-made "bullets"—that is, of carefully prepared medicines, made on the single-remedy principle, with a view to target practice.

Every departure in pharmacy which tends to concentration of the remedial principle is a concession to, and a promoter of, dynamic therapeutics. It is this, I think, which, consciously or unconsciously, gives the most basic *raison d'être* to the active-principle movement and ensures its permanence and expansion. It is directly in furtherance of dynamic therapeutics—an immediate and integral feature of the new medicine.

Equally logical, in the carrying out of this system of therapeutics, is the revision which we have made of the question of dosage. When drugs were given for their "action," when the finely organized dynamism of the body was regarded as so much inertia, and medicines were hurled in to overcome the inertia, the question of dose naturally resolved itself into a determination of the least amount with which any such "action" could be obtained and the greatest amount that could be safely thrown in; hence the minimum and maximum dosage, which our pharmacopeias and our formularies still retain as a vestigial appendix of the old subjective system which modern medicine has outgrown. But with drugs given for their reaction, with the body regarded as a dynamic force-complex, ranging all the way from the most delicate balance to the most furious vortex of motion which our medicines are designed to dynamically influence, dose becomes itself a dynamic quantity.

What Is a Proper Dose?

The proper dose of a given remedy is the dose which will induce in the patient the reaction desired in that particular case. It is gratuitous to talk about a maximum dose, since death or poisoning is never the de-

sired reaction. It is equally futile to speak of a minimum dose, because, as stated, stimuli and reaction differ in different individuals.

The truth is that, under the modern conception of therapeutics, the value of the term dose has been transferred to the other side of the equation; it is no longer a function of the drug but of the reaction.

In the practical outworking of the modern dose, as of the single remedy, it is altogether imperative that we have at our disposal the drug, the whole drug, and nothing but the drug—the double-distilled, concentrated and sublimated essence of the drug. For the presence, however small, of impurities, inert or useless elements vitiates our calculations by just so much, and weakens the accuracy of our aim.

In this respect, also, I think the active-principle therapy amply justifies itself. It is not alone the concentrated character of the alkaloidal remedy itself that accounts for its prompt and effective results. (That the results *are* prompt and effective, nobody that has ever used the alkaloidal remedies questions, no matter what his attitude toward the alkaloidal principle. Only those who have never used them are skeptical on this point.) A large proportion of the satisfactory response is due to the nice control which they give the practitioner in the matter of dosage, which, as intimated, the modern physician measures, not by drug-mass, but by reaction. This, in my judgment, is one of the cardinal considerations of modern therapeutics, and is, therefore, one of the most important features of the active-principle pharmacology.

The Summing Up

To sum up. The old subjective conception of disease regarded it as having its beginning, continuance and end within the patient's body; had its expression in humors and cholers, and the like; and it called for a drug-therapy that should forcibly "drive out the disease."

The ultraobjective conception, on the other hand, held disease to be a clash of contending elements and forces, quite foreign to the patient, to which his body served as the passive arena; considered that the clinical issue rested in the patient's constitutional capacity to survive the stress; denied the power of drugs to influence the course of the disease; and thus begot a therapeutic nihilism which even now is dying hard.

The modern conception regards disease as a disturbed phase of the interplay of action and reaction between the organism and its environment, directs its positive therapy toward assisting the man's end of the struggle, and therefore looks upon therapeutics as a dynamic affair, the aim of which is not to force drug-action upon the organism, but to arouse reaction in it.

The efficient carrying out of this new idea of therapeutics, in addition to the high degree of diagnostic and clinical intelligence which it implies, imperatively demands the adoption and practice of the single-remedy principle and of the dynamic standard of dosage. And these, in turn, require for their effective out-working the maximum concentration and solubility of the active remedial principle, whether this be an alkaloid or something else

YOU and I deal with the seen, with the ills and griefs of the foreground, and we are quite right in doing so, but we ought to give all honor to the spiritual imagination by means of which the man of science grasps those unseen truths which are eternal, and, using them as a lever, lifts us all out of our difficulties.—Richard C. Cabot.

The Twenty-Drug Idea

The Disadvantages of Too Much "Simplicity"

By A. L. BENEDICT, A. M., M. D., Buffalo, New York

EDITORIAL NOTE.—If experience teaches anything, it is, that the best workman is the one who best understands and has the most skill in the use of his tools. Somehow there has grown up in the medical profession the idea that the mind of the physician is too feeble to appreciate the possibilities of more than a score of drugs and that to know these well he must not even try to understand and use others. It is this idea that Dr. Benedict combats.

IT is an old idea that crops out in the most different connections, at frequent intervals, to simplify mental labor and secure thoroughness by limiting ourselves to a small number of drugs, books, suits of clothes, and what not. *The Therapeutic Gazette*, in the issue of July 15, 1910, reviews several articles on the subject of a limited armamentarium—so noncommittally that it is hardly possible to state the gist of the article. Somewhere in my manuscript file is a twenty-drug article, written in accordance with the request of an editor and held, not for publication but to remind me of my own folly in attempting to limit myself to an impossibly small number of agents even for the treatment of a limited class of diseases.

Not Twenty, but Four or Five Hundred

Some years ago I listed the drugs used in the prescriptions of several years and found that they amounted to four or five hundred, in spite of consistent efforts at simplicity, not only as a matter of time-saving (lazy folk always take the most pains), but to insure a proper concentration of information.

It is the intention of this article to keep away from a listing of items and to throw this work on the reader. Accordingly, I make this suggestion to anyone who inclines to the twenty- or even fifty-drug idea. Look over your own office stock of substances that you ordinarily do not prescribe or think of as drugs and count them: Aqua, aqua ammoniæ, chloroformum, æther, gossypium purificatum, æthylis chloridum, aqua hydrogennii dioxid; and so along the shelves. Now

look about you and count the things you keep in the office that are practically indispensable, and you will find, unless your practice is peculiarly limited and lady-like, that the limit of twenty is greatly exceeded.

The Emergency List Not a Small One

The writer's hypodermic case, which is intended to contain only necessary emergency drugs, holds twelve different articles. One of these, apomorphine, has been used only a few times in twenty years, but when needed, it is needed very much indeed. No one can be more conservative about morphine than the writer. He has never even used up the free samples forced upon him. Yet who can do without morphine?

Then, too, the pocket-case or hand-satchel with drugs for extemporaneous dispensing, varying from the small outfit of the prescription writer in the city who carries only what may be needed at a moment's notice, to the elaborate supply of the man who is his own druggist by necessity or choice, adds materially to the number of drugs employed, day after day.

In estimating the command that a writer has over language, it is not the pronouns, articles, common verbs, prepositions and conjunctions that are used over and over again that constitute his vocabulary, but the words, mostly nouns, to a less degree rare verbs and adjectives, any one of which appears only a few times in a book. So the therapeutic power of a physician is to be estimated not so much by his use of morphine, bromine salt, bismuth, calomel, etc., but by his wise choice of the occasional

drug, prescribed once in a year or a month; and it is such drugs that swell the list that represent his available *materia medica*.

It is not meant by this that the routine employment of drugs, as of other professional means, is not a test of ability, nor that an effort should be made to find a new drug for each case; but the man who never goes outside his little list of favorites, to avoid this or that contraindication or to secure some special effect, will, generally speaking, use his limited *materia medica* as a matter of habit rather than of intelligence. In the case of the literary writer, a large vocabulary may indicate a nice discrimination in the use of words and a large fund of knowledge, or it may indicate merely a form of ostentation easily gratified by running through the pages of a dictionary. So, in the case of the physician, it is easy to counterfeit a wide knowledge of therapeutics simply by scanning the pages of a work on *materia medica*, getting a superficial idea of the applicability of a drug, and using a variety of drugs of the same general group indiscriminately.

It may be stated in paradoxical terms that the best therapist is the man who is constantly trying to simplify and restrict his armamentarium and who, nevertheless, is always looking for something to supplement and supplant what he already has.

Simplicity Aided By the Active Principles

This effort at simplicity, while striving for the best without regard to simplicity, is greatly aided by the use of reliable active principles. There is a strong sentiment—and the word sentiment is used advisedly—in favor of galenicals. Unfortunately, in fully half the galenicals one is using at least two drugs, the one intended and alcohol; the latter, it is true, not in large dose, still in sufficient quantity to act locally on the stomach and, in susceptible individuals, to have at least the possibility of moderate vasodilatation and cerebral inhibition. In some cases, that of opiates, for example, the administration of galenicals involves not only the conjoint action of alcohol, or of some other drug (glycerin, ammonia, ether, acetic acid, etc.), which may at least affect the stomach,

but the crossed action of the main alkaloid with one or several others, which may be more or less synergists or antagonists to the principal alkaloid.

Now, it is not only the duty of the physician to know why he prescribes a certain drug, he should also watch that drug to see whether it is doing what he expects. In other words, every drug administration should be not only a check on one's diagnosis and interpretation of indication, but of drug-action in general. A great deal of the vogue of therapeutic nihilism is due to the fact that lecturers and writers on therapeutics have repeated a lot of trash that was either false or true only in a qualified sense. As one candid teacher said of the class of drugs called antispasmodics, they were so called because there was no form of spasm which they would control. And pretty much the same might be said of ecbolics, stomachics, nervines, etc.

Actual Advance Depends Upon Study of Drug Units

The endeavor to classify drugs has done immeasurable harm to therapeutics. The only actual advance has been by the study, experimentally and clinically, of each drug by itself. Now, a drug in galenical form is not just itself alone. Aside from the action of alcohol and other excipients and of concomitant alkaloids, etc., of importance, the various ingredients, whether derived from the drug or adventitious, that go to make up a composite flavor, are often of the utmost importance because they set up reflexes in the alimentary canal. Consider the instances in which a galenical preparation of digitalis nauseates, when a small tablet can easily be retained. Consider the fact that magnesium sulphate seems to be more energetic than sodium sulphate partly because it tastes nasty, or that the adventitious bitter in cascara seems to reinforce its cathartic action in a similar manner.

On the other hand, there seem to be some few vegetable drugs the active principles of which have not been satisfactorily isolated—or it may be that the natural polypharmacy happens to be what is needed. In such

instances, as always, a conservative regard for indubitable experience should guide us, though not to the extent of pessimism for the future.

As has been intimated in other articles, the writer has quite a strong leaning to the beliefs of the past, always provided that they are properly qualified according to actual facts. The confession has been made, in one of these articles, of a search for specifics, though with no childlike faith that any drug will cure in one hundred percent of cases, and with no idea that a very careless nomenclature of complicated disease-conditions can be made the basis of therapeutic indications. But, in so far as an exact unit of lesion or perversion of function can be formulated, it is rational to believe that if that unit can be benefited at all by a certain procedure, the same procedure will always have the same effect.

In the writer's opinion, too much stress has been laid upon idiosyncrasy, at least in regard to drugs. Too often the name idiosyncrasy means simply that a drug, unintelligently chosen, has had a perfectly logical, harmful action. The delicacy of response to reflexes is, of course, difficult to estimate in advance; so, too, if one has no idea of the exact acidity and bulk of stomach-contents, one cannot tell how a given dose of acid or alkali will act to afford relief. Thus there is, in a sense, an idiosyncrasy to dose. Much more rarely than textbooks imply is there a reversal of physiologic effect, in any true sense, such as the excitant action of morphine.

In short, therapeutics is a fairly exact art, provided that it is based on correspondingly exact indications, although much of the time-honored teaching has fostered an unreasonable expectation of results—doomed, of course, to disappointment.

Without venturing into details, it is obvious that the various chemic, antiseptic, excitoreflex, sedative, and local indications which could be designated as units of lesion or perversion of function are quite numerous.

It is true that, occasionally, a single drug may fulfil, apparently, quite independent indications. Antiseptic and anesthetic or

anodyne actions are quite apt to be associated, for the obvious reason that at the root of these actions is the same depressant effect upon protoplasm. So, too, the cardiac, vascular, bronchiolar, intestinal, uterine and intraocular involuntary muscles, having the same or very similar structure, are liable to be acted upon in the same way by the same drug, but producing very different ultimate effects.

Sometimes, however, the association of therapeutic actions is not so obvious and may even appear ludicrous. For instance, a person with acute rheumatism, a sore throat, intestinal saprophytosis with indol formation, gallstones, septic cystitis (urinary), a corn, or certain forms of external parasites, might receive some form of salicylic acid as a rational treatment (and by rational is not meant ideal or necessarily curative) for each condition.

Each Lesion or Disturbance Presents a Therapeutic Indication

But, on the whole, we must expect a different therapeutic indication for each disease-lesion or perversion of function. More than this, what may be termed the essential therapeutic agent is rarely an element, by no means always a simple combination of basic and acid radicle. In many instances the indication is for an acid or an alkaline substance, and here there may reasonably be expected a choice, according to individual conditions, among many acids or alkalis. About the simplest therapeutic agent is a salt in which either the basic or the acid radicle alone is the essential remedial agent. But, whichever is the main indication, it is a well-known fact that one or another substitute in the other portion of the molecule may be preferable. About fifteen basic elements are commonly employed as medicines. On the average, without drawing far-fetched distinctions, four or five salts, oxides or other simple inorganic combinations of each are available. When the acid radicle is the essential therapeutic unit, we have, even without venturing far into the realm of organic chemistry, a much longer list, and in nearly every instance a rational

choice must be made between the acid itself (or, if we so call it, the hydrogen salt) or a combination with one of a number of elemental or compound bases.

The newer *materia medica* includes a number of drugs in which some characteristic, fairly complex molecule-moiety is the active therapeutic unit. It need not act as either base or acid radicle, and it is susceptible of so great change, aside from mere combination with some other moiety of a molecule, that we can scarcely designate it by a given name. We have already alluded to salicylates. Not only must there be an intelligent choice among the H, Na, K, NH_4 and Sr salicylates, not to mention other metals with which the combination is possible, but we must not forget the CH_3 salicylate (practically wintergreen or sweet-birch oil), C_6H_5 salicylate (salol), and such further combinations as salacetol, aspirin, etc., nor the still further modified forms of the salicylic-acid radicle into benzoic acid, with corresponding compounds.

Growth of the Synthetic *Materia Medica*

To a large degree the synthetic *materia medica* grows by adopting a modification less toxic and more energetic therapeutically of a certain substance, which itself then becomes unnecessary; but it is by no means a case of adding at one end and subtracting at the other. We are, on the contrary, just beginning to conceive of the principles governing the interaction of complex organic chemicals administered as drugs, with still more complex organic chemicals forming proximate principles of the body, and to conceive of a therapeutic effect as a chemic reaction.

In a sense the growth of our knowledge of organic chemistry will simplify research for new and improved drugs because we shall follow logical paths of induction in-

stead of groping blindly and empirically for a diminution of toxicity, increase of some particular physiologic effect and modification of by-effects. But the more definite our knowledge becomes, the more we shall have to discriminate in establishing therapeutic indications, and the greater number of variants must we have at our disposal for each principal unit of indication.

More Agents, Not Fewer, the Need

From quite a different viewpoint it is evident that the tendency to limit our therapeutic agents to a small number is futile. Each intelligent practitioner devotes a good share of his attention and skill to finding out things that he does not know.

The definite conception of ignorance, in a particular field of thought, is the first step toward real knowledge. For instance, we want a dwarfed scarlet-fever germ, either by passage through a lower animal or quite artificially which, introduced into a child, will produce redness and exfoliation over a space the size of a nickel, which may be transmitted to others in the same mitigated form, but not as typical scarlatina, and which will prevent the occurrence of scarlatina as it exists today.

We want the same kind of vaccine for every semelincident disease. We want ferments which will cause sugar and fat to be properly oxidized in the system. We want satisfactory solvents for various forms of calculi. We want a heart tonic that will not tighten up the arterioles. We want something that will do what quebracho was supposed to do and what fibrolysin is still claimed to do. We want many things in therapeutics, not all of which we shall get; still, we may well hope to see our wishes fulfilled in part. And, as our art improves, we shall get farther and farther from the notion of a "five-foot shelf" of twenty bottles.



Injuries to the Bones of the Hand

With Simple Directions for Their Treatment

By RALPH ST. J. PERRY, M. D., Farmington, Minnesota

EDITORIAL NOTE.—This is the second paper in Dr. Perry's series on "Injuries of the Hand." This month he discusses periostitis, acute and chronic, following bruises or other traumatisms, osteitis and osteomyelitis, caries and necrosis, epiphysitis and fractures of the different bones of the hand. The treatment is simple, within the means of every physician, and the apparatus described inexpensive as well as effective.

II

Cases of Bone Surgery

Case 9. Railway brakeman. The hand was caught in making a coupling and pinched severely enough to fracture the *os magnum*, chip a piece from the third metacarpal and crush the dorsal tissues overlying those bones. (Fig. 6.) The fragments of the *os magnum* were coapted and held in apposition; the fragment from the metacarpal was



Fig. 6. Fracture of *os magnum*, with clipping of the third metacarpal

replaced and nailed in place. The soft parts were dressed with iodoform and loosely approximated with silkworm-gut sutures. The hand was dressed upon a metal plantar splint. After several days, healthy granulation being established, the approximation sutures were drawn up, a few strands of silkworm gut being inserted for drainage, and the palmar splint continued during three weeks of recovery.

Case 10. Railway brakeman. The hand was caught in making a coupling and the semilunar bone fractured, with mashing of

the palmar and dorsal soft parts. Holes were drilled through the fragments, two in each, and silkworm gut looped through; the fragments were coapted and the gut tied so as to maintain correct apposition. The soft parts were dressed with iodoform and the hand supported upon a metal palmar splint. The wound was allowed to heal over, enclosing the sutures, which were removed about a month later, without trouble, through a small aseptic incision under cocaine anesthesia.

Case 11. Stone mason. The man was accidentally struck by a fellow workman, with a hammer, the blow breaking off that portion of the pisiform bone to which the muscles were attached, as was apparent upon palpation and demonstrated by an

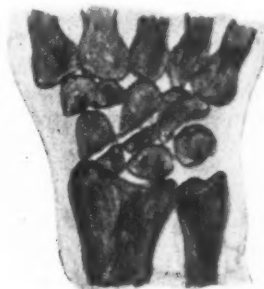


Fig. 7. Fracture of *os magnum* and scaphoid

x-ray examination. Under cocaine anesthesia an aseptic incision exposed the bone. The fragment was drilled and nailed in place with a magnesium bead, the incision closed and a plaster-paris dressing applied, which two weeks later was supplanted by an

adhesive-plaster splint. At the end of the third week the patient was discharged.

Case 12. Printing-press feeder. The hand was caught in the machine and the os magnum and scaphoid were fractured, with bruising of the soft parts. (Fig. 7.) Under chloroform a dorsal incision was made and the fragments were sutured as in Case 10. Owing to some idiosyncrasy, there was delayed union and resort was had to the phosphorus treatment, with a few applications of the counterirritating salve, which brought about rapid improvement and eventually a good union.

Upon attempting to remove the silkworm-gut sutures, some two months after their insertion, they were found to be imbedded in the callus, so the knots were cut off close and the imbedded portions left to become encysted. No trouble has since developed from them though they have now been encysted for several years.

Case 13. Machinist. The right hand was caught under a die press or stamping machine and suffered a fracture of the trapezium and trapezoid, with laceration of the palmar and dorsal soft parts and dislocation of the trapezial articulations. The patient had just begun work, the hand and machine were unusually clean, so the wound was not as badly infected as might have been.

The fragments of the bones were drilled and sutured, the inner fragment of the trapezoid being sutured to the outer fragment of the trapezium, the suture passing over the other two fragments and the trapeziotrapezoid articulation, thus securing the several fragments and also holding the two articulating surfaces together. The scaphoid was drilled and the trapezial fragments were sutured thereto to secure the articulation with that bone. Magnesium-wire sutures were used. The soft parts were dressed with iodoform and allowed to heal by granulation, which they did in ten days. A palmar splint was used for two weeks, then an adhesive-plaster splint for another two weeks. Passive motion was instituted after the seventh day.

Case 14. Railway brakeman. In making a coupling the hand was mashed, resulting in a comminuted fracture of the os magnum

and scaphoid and the pulpifying of the soft parts covering the same.

After cleansing the crushed parts and checking the bleeding, the finer spiculæ of bone were removed entirely and the larger fragments adjusted, as well as possible, to the general form of the normal bones, being held in place by portions of periosteum, ligaments and connective tissue, and by threads of fine tinned steel wire, which were passed through the fragments by an ordinary sewing needle. The hand was supported upon a shaped splint of wire gauze and the hot-water treatment was applied for several days, until reaction had subsided and granulation was well established. The hot water was medicated with calendula.

As soon as the vitality of the damaged tissues was well restored and the parts were well on the way to healing, the hot-water treatment gave way to ordinary dressings of iodoform and moist gauze; the hand being still supported on the wire-gauze splint. The wire sutures were left in the bones and became incorporated in the calluses. Recovery took place in six weeks, leaving a fairly useful hand.

Injuries to the Metacarpal Bones

The metacarpal bones are subject to fractures from direct violence where impact is received upon the palm or back of the hand, and from indirect violence where the force is transmitted through the phalangeal bones as in striking a blow with the fist, in falling upon the closed hand or where the arm is jammed with the hand closed. The several signs of fracture may or may not be present; an x-ray examination will settle the diagnosis in a few seconds.

There may be no apparent deformity and yet be displacement enough to disable the hand. Frequently the fragments are displaced backward and the corresponding finger appears shortened; occasionally the distal fragment is rotated, carrying the finger with it. The relation of the finger to the median line is no indication of the position of the distal fragment. In cases of lateral displacement of the fragments there is more or less crowding and displacement of the

adjacent bones and consequent loss of function of the hand. The head of the fractured bone may be pushed forward, in which event the corresponding finger cannot be fully flexed and the grasping power of the hand is weakened.

In many cases of carpal fracture or dislocation the metacarpal bones are notched or chipped at the base. Should it be impossible to reduce a metacarpal fracture by manipulation or to maintain coaptation by external appliances, there should be no hesitancy in cutting down upon and suturing the fragments. In old ununited fractures suturing, after freshening up the calloused ends, is the most satisfactory treatment. In severe cases of vicious union the bone can be cut or sawed through and sutured in correct apposition, with assurance of relief.

The greatest disability in metacarpal fractures is seen in those cases where the fracture is associated with a dislocation of either the head or base of the bone, thereby interfering with the articulations of the other bones of the hands.

Such conditions are frequently met with in crushing and mashing injuries, and as these are open wounds and the parts freely accessible, the fragments should be replaced, sutured together, and if necessary, to retain them in proper position, sutured to adjacent bones. Silkworm-gut sutures connecting two bones and passing over a joint do no harm and do not interfere with the action of the joint; the necessary drill wound in the adjacent sound bone soon heals, and the additional injury is insignificant compared with the disability sure to follow if such treatment is not carried out.

Fractures involving the articulating surfaces of the bones are not necessarily prejudicial to the integrity of the joint, as many such fractures have been known to heal without ankylosis or with so little as to cause no disability.

A Case of Bennett's Fracture

Case 15. Mechanic. A heavy piece of machinery struck the thumb and obliquely fractured the first metacarpal near the base, producing a *Bennett's fracture* or *stave of the*

thumb. (Fig. 8.) Because of the importance of the thumb in the patient's work, the fractured bone was aseptically cut down upon, the fragments were tightly sutured with thirty-day catgut, and the incision was closed and dressed antiseptically. The incision healed nicely in one week and the bone united soundly, without faulty coaptation, in three weeks.

Case 16. Railroad section man. A falling timber struck the back of the hand, fractur-



Fig. 8. Fracture of metacarpal of thumb—
"Bennett's fracture"

ing the third metacarpal. The fragments were adjusted without trouble and a slate-pencil splint was applied as shown in Figure 11 and readjusted from time to time as the plaster straps became loosened. The patient was discharged in three weeks.

Case 17. Laborer. In a fight the man was struck with a club or stick on the radial side of the hand between the thumb and index-finger, breaking the index-metacarpal and driving the fragments against the third metacarpal. The fragments were manipulated into position and good apposition was secured, this being maintained by a slate-pencil splint. The splint was kept on for four weeks, when the patient was discharged.

This form of the slate-pencil splint is also used in fractures of the fifth metacarpal.

Case 18. Carpenter. In carelessly using an adz it cut into the hand, cutting diagonally



Fig. 9. Oblique fracture of the second metacarpal

through the second metacarpal bone (Fig. 9.). The wound was cleansed, the two fragments were approximated and drilled, the drill passing through the oblique ends while in apposition, and sutured with magnesium wire. The incised wound was closed, after inserting two strands of silk-worm-gut as drainage, and an iodoform dressing applied. After the second day, there being no wound discharge, the drains were removed. A good result was secured in three weeks.

Hand Caught in Cog-Wheels

Case 19. Mechanic. The hand was caught between cog-wheels and the soft parts were crushed with a comminuted fracture of the fifth metacarpal bone in its middle third without injury to either articulation. The wound was cleansed of debris and the fragments of bone were replaced, apposed and

strung on tinned steel wire to maintain apposition. (See Case 14.) The hot-water treatment (q. v.) was used for a few days, and healthy granulation was established, when the usual iodoform dressings were applied and the wound allowed to heal from the bottom, the edges being supported and gradually approximated by adhesive-plaster strips.

Case 20. Stationary engineer. The hand was caught in a machine and the third metacarpal bone was fractured; in the effort to extricate the hand the distal fragment suffered a forward dislocation which was quite plain to both sight and touch. An aseptic incision was made over the site of the fracture, the fragments were drilled and a magnesium wire suture was put in. The dislocated head was then replaced and the



Fig. 10. Fracture of second metacarpal with lateral displacement

fragments manipulated into close apposition, after which the suture was drawn tight and fastened. The incision was closed and dressed antiseptically and the hand placed at rest upon a palmar wire-gauze splint. The wound was dressed with bismuth formic iodide as needed, and the patient discharged in five weeks with good finger motion.

Case 21. Merchant. The man fell upon the ice and hurt the hand. What he sup-

posed to be a severe bruise turned out to be a fracture of the fourth metacarpal. The fragments were manipulated into place and correct apposition was maintained by means of small aluminum rods applied in the same

sprain he had applied liniments, etc., but without relief, keeping at his work the meanwhile as best he could. Suspecting a fracture, an x-ray examination was made, which revealed an ununited fracture of the third metacarpal. The site of the fracture was cut down upon under aseptic precautions, the



Fig. 11. Dorsal view of coaptation and traction-splint of slate pencils applied to a fracture of the third metacarpal

manner as the slate-pencil splint shown in Figures 11 and 12. The aluminum rods were used rather than slate pencils because they were lighter, smoother, cleaner and less liable to break. Splints were readjusted from time

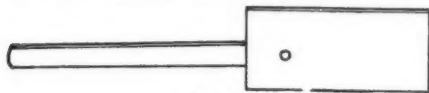


Fig. 12

to time as needed and finally removed at the end of the third week.

Case 22. Mechanic. Some weeks before coming to the surgeon he had fallen and hurt his hand. Supposing the injury to be a bad



Fig. 13. Marsee splint adjusted for fracture of first phalanx of the index-finger

calloused ends were curetted until healthy tissue was exposed and the fragments drilled and sutured with thirty-day catgut. The wound was closed and sealed with iodoform collodion and the hand dressed in a plaster cast to insure absolute rest and no meddling. The patient was put upon the phosphorus treatment, and firm union was secured in four weeks.

Case 23. Railroad section man applied for treatment for a broken thumb which had been injured the week before and dressed by some surgeon who applied wooden splints. An x-ray examination showed a fracture of the first phalanx and absolutely no coaptation of the fragments. The space between the fragments being filled with callus-forming tissue, it was deemed best not to interfere with the healing process, though the temptation was great to open up the parts, clean out the interposed tissue and suture the fragments in close coaptation. Some weeks later incisions were made on the upper and lower surfaces of the thumb and the sharp projecting edges of the fragments were smoothed off, which made the thumb less painful in grasping and holding and increased its usefulness.

The phalanges are subject to fractures from direct violence and some surgeons admit having seen fractures due to indirect force as a result of forcible flexion of the fingers. Most phalangeal fractures are associated with crushing or mashing of the fingers. The usual symptoms are present to a greater or less degree; doubtful cases can be readily diagnosed by an x-ray examination. The remarks on manipulation, coaptation and fixation of the metacarpal bones apply equally well to the phalanges, but the latter being free from and lacking the restraining and supporting effects of companion bones are more apt to suffer dislocation and to a greater degree. The phalanges are more easily manipulated than the metacarpals but there is more difficulty in maintaining coaptation. The majority of frac-



Fig. 14. Marsee splint adjusted; palmar aspect

tures occur in the first phalanx and the fragments nearly always form an angle pointing toward the palmar surface, giving the finger a decidedly "sway-backed" appearance. This deformity is not readily overcome by ordinary splints but can be successfully corrected and the fragments retained in proper apposition by the Marsee finger-splint.

A Splint for Fractured Fingers

This splint (Fig. 13 and 14.) is made of a piece of sufficiently heavy galvanized strap iron, one inch wide by fourteen inches long, the ends rounded and all edges smoothed. This strap should be light enough to be readily

bent by the unaided fingers. To one end of this is riveted, with one rivet, a piece of heavy canvas or light leather, as shown in the cut, which gives the splint stability when bandaged in place. When occasion demands its use the splint is shaped to meet the require-



Fig. 15. A splint for the fingers, with sliding attachment

ments of the individual case; for ordinary fractures (and dislocations) of the fingers the proper shape is shown in Figure 15.

It will be noticed that in this particular splint there is an abrupt curve at the place where the splint fits under the first phalanx, it being intended for a fracture of that bone. This abruptness in the curve is the essential feature of the splint, as it overcomes the "swayback" deformity by maintaining the fragments in correct apposition. In shaping the splint it is well to fit it to the corresponding finger of a sound hand held in the semiflexed position of repose, then add the abruptness to the curve to correspond with the site of the fracture. When ready for application to the fractured finger it is wrapped with gauze.

Splints can be made with the iron straps wide enough to serve for two or three fingers, or the entire group. By heating the iron at just the right place and bending to the suit-

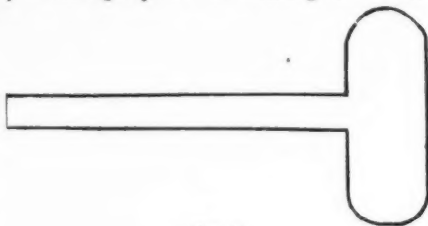


Fig. 16

able angle this splint can be used for thumb fractures. If for any reason it is undesirable to adjust the splint to the palmar aspect of the finger it can be conveniently applied to the back. The leather or canvas attachment is fastened snugly to the forearm, so that the distal end of the iron strap projects an inch beyond the finger, and fixed firmly

in place by means of adhesive plaster. The finger is carefully wrapped in several thicknesses of gauze, adjusted to the splint so that all deformity is thoroughly overcome and firmly fastened there by longitudinal and circular bands of adhesive plaster.

In Compound Fractures

In the compound fractures of crushed fingers where the dressings have to be changed frequently the iron strap can be turned to one side upon its rivet without



Fig. 17. Vicious union in a case of fracture of first phalanx of the little finger

removing the attachments at the forearm; the finger and the splint can be cleaned and unwrapped and the splint adjusted as before. Where it becomes necessary in maintaining correct coaptation to use extension this can readily be made through the projecting end of the splint, the counterextension being secured through the attachments of the forearm. Should there be a later displacement of the fragments which is not easily (or cannot be) corrected by extension, the desired result can be secured by means of the sliding attachments shown in Figure 15. To make these, cut pieces of zinc of the size and shape indicated in Figure 16, giving the body a quarter cylindrical curve to fit the finger and wrap or bend the extension arm around the iron strap as shown in Figure 15. Two or three of these sliding attachments may be needed on each splint to make its use effectual.

In compound crushing injuries it is best to have separate straps for each injured finger, all being fastened to one common piece of leather, as sliding attachments must be applied to each side of each finger, which is

impossible if two fingers be bound to one strap. This form of splint may be used in a straight position if the peculiarities of any case so demands.

A Baseball Finger Fracture

Case 24. Clerk. Suffered a fracture of the first phalanx of the ring-finger in a strenuous game of baseball. Some swelling of the finger, which was aggravated by the presence of a gold-band ring. Lateral displacement of the fragments increased the troubles incidental to the ring. To avoid further damage to the finger, metallic mercury was applied to the ring until an amalgam was formed which permitted the easy cutting away of the ring. The fragment of the bone was then coapted and a Marsee splint with lateral attachments



Fig. 18. Vicious union in a case of fracture of first phalanx of the little finger

applied. Patient discharged in three weeks in fair condition and able to attend to necessary further treatment himself.

Case 25. Farmer. Struck on the back of the hand by a falling pitchfork, suffering a fracture of the first index phalanx with angular palmar deformity. (Fig. 18.) The fragments were coapted and a Marsee splint adjusted with a special acute curve at the site

of the fracture to maintain correct apposition and to prevent any "sway-back" deformity. Discharged cured at the end of the third week.

Case 26. Railway brakeman. In unloading freight a heavy box fell on the hand, fracturing the first and second phalanges of the index-, middle and ring-fingers and bruising the soft parts considerably. The fragments were manipulated into good coaptation and a three-fingered Marsee splint with lateral attachments applied, each finger being dressed separately. A hot kaolin poultice was applied and renewed at each daily dressing for three days to prevent and alleviate pain and swelling. From the fourth day until the patient was discharged passive motion was used daily, very slight at first and gradually increasing in degree until good flexion and extension was secured. At the end of the fifth week satisfactory union having taken place, patient was discharged.

Case 27. Railway brakeman. In making a coupling the hand was caught and the middle and ring-fingers crushed with compound fractures of the first and second phalanges of each finger. The wound was well cleansed and the fragments adjusted, drilled and sutured with fine silkworm-gut so as to maintain coaptation. The fingers were then dressed with iodoform, covered with gauze and a two-fingered Marsee splint applied. The hand was dressed daily for two weeks, then every other day for two weeks. Passive motion was instituted on the fifth day and practised daily until the patient was dismissed at the end of six weeks; sutures removed at the end of the third week.

In cases of old fractures coming for treatment, if there be nonunion of fragments there is generally tissue between them and the wound should be opened, the interfering tissue removed, the fragment ends freshened as needed, and the fragments firmly sutured together. Vicious union, with deformity, disability or great pain is sufficient justification for operation, breaking up the faulty union and resetting with sutures and proper splinting to maintain correct coaptation. Where a tendon or nerve is attached to or embedded in a callosity it is reasonable to make an operative attempt to liberate the parts, as a continuance of the attachment or embedment will result in permanent disability, a condition which cannot be aggravated by operation and may be avoided.

Case 28. Well-driver. The little finger was caught in machinery and the first phalanx broken. No proper attention was given the injury and the result was vicious union, with the finger out laterally and at an angle which interfered with the man's work. (Figs. 17 and 18). Aseptically the parts were cut down upon through a dorsal incision, the callus cut apart with a small chisel, the fragment ends freshened and shaped and the fragments brought into correct apposition and relation with each other and with the hand in general. The incision was closed and sealed with iodoform-collodion and the finger dressed upon a Marsee splint with lateral attachments and slight extension. Good union in a normal position was secured in three weeks.



The Nez Percés Indians

Their Story—Written by a Doctor Who Dwelt Among Them

By CHARLES STUART MOODY, M. D., Sandpoint, Idaho

Foreword

SOME little explanation, which doubtless will end in an apology, is due the reader for burdening him with an extended series of articles on such commonplace things as Indians; and when the dissertation is confined to a single tribe of Indians, the explanation becomes all the more imperative, more particularly when it is known that the tribe is fast following the bison toward the western horizon bar.

It is owing to the fact that the Indian is fast passing from the stage of human action that it becomes necessary for someone who knew him as he formerly lived, moved and had his being to come forward and tell those things—to record for those to follow in our footsteps the things about the Indian that should be of interest to every man. The single tribe, that of the Nez Percés, is chosen as being a representative of all the western Indians, and for the further reason that the writer knew that tribe better than any of the others.

The reader is earnestly solicited to approach the subject in a sympathetic frame of mind. History presents no more somber page than that recording our treatment of the savage peoples of North America.

From the first piratical expedition of the first Spaniard on down through the development of this country, clear to the tip-end of the last century, the attitude of the so-called Christian nations toward the Indian has been so unchristlike in its character as to bring the blush of shame to the cheek of any man who believes that all men were created in the image of their Great Creator and by Him endowed with equal rights and privileges.

We lifted no hand to restrain the avarice, cupidity and heartlessness of the men who were preying upon the very life-blood of

the Indian; and now, that it has been demonstrated beyond the peradventure of a doubt that he is unable to withstand the blessings of civilization and is rapidly drifting with the tide of years out into the great ocean of eternity, to be numbered with the untold myriads that have peopled this earth for their brief span and then passed on to make room for yet other races, we are prone to look upon his passing as only another example of the law of survival of the fittest, and sigh with relief that one equation in man's problem of his duty toward his fellow man is being solved without our interference.

The writer lived for a number of years in close terms of intimacy with the Nez Percés Indians and thus learned many things about them that will forever remain a sealed scroll to the average man. The life-story of the Indians learned from that contact with them, their history gleaned from their own narratives will be set down for the amusement and possibly the instruction of the reader. The narrative will of necessity be rambling and incoherent; the ideas set forth will be couched in unpolished and oftentimes crude language. He hopes for it only the merit of being easily understood.

The story will depict the Indian as the writer knew him; if the subject is intrinsically of sufficient interest to claim your attention, then follow where the trail leads, disregarding the many things that will appeal to you as being uncouth and sadly deficient in that smooth rhythm and polish with which finished writers are wont to clothe the children of their mind. If the interest is not inherent in the subject itself, then by all means close this book here and forget that the Nez Percés ever existed or that an unsophisticated country doctor ever dreamed he could tell how they existed, for

there will be no charm of diction to woo you on with its siren song.

Early History and Discovery of the Nez Percés by the Whites

The first written record we have of the Nez Percés occurs in the journals of the Lewis and Clark expedition, under date of Friday, September 20, 1805. Early in September of that year the explorers ascended the eastern side of the Bitter Roots, crossed through the Lo Lo pass and descended into the great watershed of the Kooskia. The season of 1805 must have been unusually early—the travelers mention encountering a heavy snowfall in the Bitter Roots, and game was exceedingly scarce. They struggled through the dark defiles of the towering mountains for several days, enduring great hardships and suffering much from lack of food. They were progressing through an unknown land. No white man had ever gone that way before.

Captain Clark determined to take a small detachment of the party and push on in the hope of finding game. With some half dozen of the hardier and more adventurous spirits the brave officer bade adieu to his friends and hurried forward, keeping to the old Indian trail that joins the country of the Nez Percés with that of the Flatheads. For several days they wandered without finding game, excepting a few grouse. At length they came down upon a meadow and found a skinny old horse left there by the Indians to die. They were glad to break their fast off this fleshless equine hanging the remainder of the carcass in a tree for their companions who were following.

The Hungry Explorers Reach an Indian Village

This was the next day of the Musselshell Creek, and the next day the explorers emerged from the dense timber upon a wide-open plain, or upland meadow, the Weippe of the Indians. Across the meadow, beside a great spring that gushes from beneath the wide-spreading branches of the pines, rose the white skin tipis of an encampment of Indians. The voices of playing children rose from along the banks of the little stream

that courses down the plain. It was a welcome sight to the tired, footsore, half-starved wanderers, this pleasant tree-bordered meadow with the soft autumn sun shining down upon it, in such striking contrast to the dark, sunless, forbidding forests through which their journey had led. More welcome than all was the sound of the merry children as they raced down the stream's sandy shore.

It was not long, however, before one of the little redskins discovered the intruders and the race of play became a race for safety. The children ran with all their might toward the distant encampment. One of them, being less fleet than his mates, stumbled in the tall grass and fell. Captain Clark dismounted and ran and picked the child up in his arms. It does not require a great deal of imagination to picture the emotions of this Indian boy as he felt himself grasped in the powerful arms of the strange being who had so suddenly appeared. He felt very much as I suspect we should feel should some Martian explorer suddenly appear and seize one of us. This little copper-hued child had never before seen a man with a white skin and hairy face—to him the stranger was a being from another world, he was to him a Martian.

The genial captain carried the struggling youngster back to the caravan and there loaded him with trinkets dear to the savage heart, and turned him loose. The little savage lost no time in scurrying, like a frightened rabbit, to the protection of his ancestral tepee.

When the other boys arrived at the encampment they spread the alarm. The women with their babies, and the younger children hanging about them, hastened to the protection of the deep pine woods which lay behind the camp, while the men seized their weapons and sallied forth in defense of their homes. Meanwhile the travelers were advancing, Captain Clark in the lead, his hands extended in the manner of the Indian peace sign.

Their Safety Due to an Indian Woman

It is said that the explorers owed their protection that day to the presence in one

of the tepees of a woman, Wat-ku-ese, who had been captured many years before by the Blackfeet and by them sold into slavery among the Indians of Canada, where she met with the "black-robos" (catholic missionaries), who had been kind to her. Afterward she was purchased from her captors by the Flatheads and by them returned to her own people. On this day she lay very ill in one of the tepees. On hearing the turmoil in the camp and learning the occasion, she called out to the men to do the travelers no harm as they were the Sooyap-po ("Crowned Ones"—from their custom of wearing hats—a term used to this day to designate white people) and they came bearing a message of peace.

This intelligence, together with the presents brought by the boy who by this time had arrived, served to quiet the apprehensions of the men and they received the explorers with that hospitality that has always marked the bearing of the Nez Percés. They brought them in, placed food before them, and at night gave them a large tepee in which to repose.

This was the first introduction of the whites to the Nez Percés Indians, although it is stated by the old chroniclers that the people must have had some knowledge of the whites before this time. And this must be true, for there are certain words in the

language that could only have had their origin among the white people; also a few articles evidently of white manufacture were found among these Indians at a very early period.

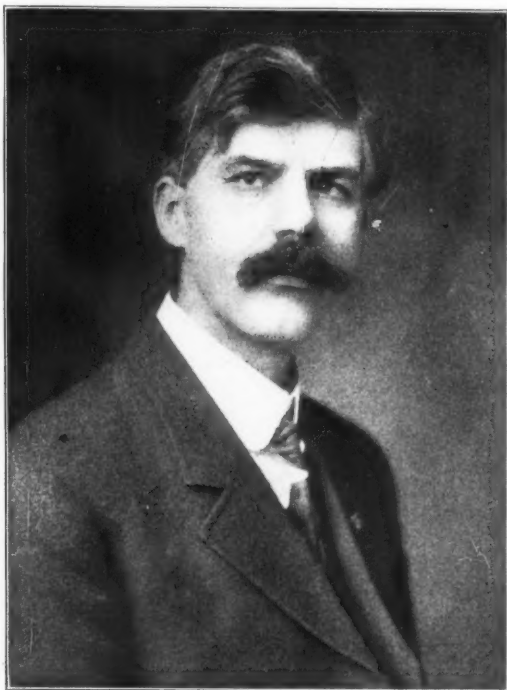
Shortly after my arrival among the Nez Percés I formed the acquaintance of an

ancient savage known as Hale Moody. I have never been able to trace any blood relationship between us, but the old fellow was vastly pleased when he learned that we bore the same name. He used to say to strangers: "*Pas ke Los Los sikiptuat Moody. Imim Hale Moody.*" That is the doctor Moody. I am Hale Moody.)

When I first came to know old Hale he was very, very old. How old, he did not know, of course. He was nearly sightless and his knees

were so swollen with rheumatism that he could scarcely walk. I gained his friendship and confidence by rubbing his aching joints with chloroform liniment, a treatment that he insisted gave him much relief, and he never failed to hobble over twice a week to have it administered.

So it came about that after I had gained sufficient command of the language to render myself intelligible, this old redskin used to tell me by the hour the legends, traditions and tribal history of his people. Old Hale was a small boy that day when the explorers came—as a matter of fact, he was one of



CHARLES STUART MOODY

the urchins playing along the watercourse. Many a time on bright summer days we would sit beneath the shade of a giant cottonwood that grew upon the river shore, and the old man would turn his almost sightless eyes toward the sunshine and recite to me those tales.

On yet other days we would mount our ponies (for he was still a good horseman) and ride for miles along the river and up the canyon sides, where he would point out to me the places made historic by the white strangers who came with their message of peace. It was a thrilling little drama, that early settlement of the West, and the Nez Percés took active part in it. Being firm friends of the whites, to them fell many incidents which they treasured and retold for years.

Hale Locates the Place Where the Explorers Came

At one time there rose a controversy as to just where the explorers actually arrived at the Kooskia. I said to Hale, one morning: "Hale, can you tell me the exact point where the Soo-yap-po reached the Kooskia?" "Aeh" (Yes), he replied, "I can and I will. Go with me and I will show you; though you yourself have been there many times. Yes, you have walked over the very spot where the white men first camped and have rode the same trail the first white men traveled, though it is an old trail and now we use it no more."

We mounted our ponies and rode up the sandy river shore to a point something like a mile above where the town of Orofino now stands. There the river cuts through a gorge, leaving an island in the center of it. This island was (for it is there no longer now) about five acres in extent and lay at the foot of a deep, still pool where the waters collect for their mad rush through the gorge. We rode over the steep cliff that frowns above the boiling water and came down to the river again above the island. A dim old disused trail winds down out of the hills and terminates at the edge of the pool. Here old Hale halted and painfully dismounted. He seated himself beneath a pine and filled his

pipe. For several minutes he smoked in silence. I had grown familiar enough with Indian characteristics by this time to avoid breaking his reverie. After a time he spoke.

"It was just here," he said. "I was with them when they came. The camp of Twisted Hair, our chief, was yonder on that island. It was in the month of huckleberries, and our people, some of them, were camped on the Weippe to be near the berry fields. When the white men came out of the deep woods and we saw them where we were playing, we were much frightened and ran; but they were friends, we soon found, and not like the Blackfeet, who often came to do us hurt. The women were afraid, too, and all ran away. There were only a few men. But our men are brave, so they went forth to meet the strangers, with their bows in their hands.

"Yes, it was Wat-ku-ese that told us who the men were, although she thought they were the 'black-robos,' which was not true. They were greater than the 'black-robos,' for they came from the Great Father. When night came the women crept back from the woods and we all stood about the fires watching the white men eat and smoke. That was the first time I had ever seen men smoke and it was strange.

"The next day we all came down here to where Twisted Hair lived. This was the place and not the Lo Lo, as some tell you. Twisted Hair came over with his canoe and took the strangers to his camp. It was the season of low water, and the travelers made their horses cross the water just up yonder where the water breaks over the rocks. That is where our ponies always crossed, and do still.

The Presentation of the Medal

"In a few days some other white men came, and the next day Twisted Hair sent forth the runners and they called all the people together for a great 'talk.'

"In the talk the last white man who came gave to Twisted Hair a coat, a flag and a medal (the old man said "a piece of white money") and told him that all these things were for peace and friendship between the

whites and the Indians forever, and to show the flag and the money to any white man, and it would be a talisman for our protection. They agreed to help us in our battles against the Blackfeet and never to hurt any of us for all time."

I had heard rumors of this medal for several years and tried to learn from the old man what had become of it, but he would not tell me, if he knew. I afterward found out and recovered it—an interesting incident which will be told in its proper place.

The Expedition's Primitive Shipyard

Not many days after this we were again talking about the visit of the explorers, and I asked Hale if he knew where the canoes were built in which they sought the western ocean. "Aeh," he replied, "all Nez Percés know that. Some day I will show you."

A few days later I overtook him riding along the river trail below where we lived, singing "The Wolf is Come," a sort of Nez Percés national air. He knew me, as I rode up behind him, by the sound of my horse's hoofs in the trail. Without turning his head he spoke: "I am glad, Sikiptuat, you have come. I was dreaming of your people. We will now go to where the white men made their boats—such large boats, and they made them with axes and saws so quickly. In two days they made a boat that would have taken our people moons to make. But they were sick at that time, were the white men, all of them. There was one black man, and he was not sick. That was strange. Why should not the black man become sick too?" As he asked this question he turned to look at me. But I could not answer.

We rode down the south river to a point something like a mile above where the Kooskia joins it and crossed over at an old ford where the stream widens out and ripples over a reef of rock. As we mounted the steep bank on the south side, Hale looked back at the water and said: "It was here they crossed, and down yonder is where they halted to build their canoes. Let us go."

We rode down the pleasant slope that borders the river to where a dense grove of

pinus stood nearly touching the water. Below them lay a long, narrow sandbar with scattering timber covering it; a lagoon half transformed the sandbar into an island. Hale rode to the foot of the bar and looked about for a minute, then turned his horse and rode toward the mainland. He halted upon a level plat of ground sheltered by an immense pine. "Here," he said, "is the spot where their camp stood, and up yonder stood the trees that were cut down to make the canoes."

I dismounted and scrambled up the steep hillside through the dense undergrowth until I located three immense yellow-pine stumps, all rotted excepting the resinous core. That these were the identical stumps I am very much in doubt, though it did not require a wide stretch of imagination to believe them to be. At any rate, I stood upon the ground made famous as being the shipyard where was constructed the flotilla that sought the western ocean where today float the argosies of a world. With a civil-engineer friend and an instrument we afterward took the latitude and longitude and verified the old Indian's statement as to where the craft were constructed.

The Engraven Pine Trees

On our way back, that day, Old Hale halted beside the river on the north side and pointed to where the water had cut away the bank by being forced against it by an immense slipped rock lying opposite.

"It was here," the old man said, "that two trees once stood with writing on them. When the white men were ready to depart, on their return journey, they made writing on two large pines that stood near the shore, right here, and told us never to touch them. We never did. They stood there for many snows, until one time a great mountain of rock came down over yonder and the river moved over here and washed them away."

It seems singular that the explorers make no mention of these trees in their journals, but that they were there is attested by many of the very old white people who have lived among the Indians for years. Uncle James Holt, whose wife is a member of the tribe,

recalls the trees very well, as he does also the slide that caused them to be washed away.

Old Hale never embraced the Christian religion and died in his pagan faith, which, allow me to suggest, fits the Indian character much better than does the Christian belief.

We found him, one day, sitting beneath a thorn tree that grew beside his spring, his face turned toward the sunset, his soul flown, let us hope to that land where he could meet with his people who had gone before.

The Treatment of Whooping-Cough

A Review of Twenty-three Years' Experience

By W. F. RADUE, M. D., Union Hill, New Jersey

IN undertaking to discuss the treatment of whooping-cough I am well aware that this subject has been written about again and again; but nevertheless it will bear repetition, especially for the young doctor just out of college, although by no means this subject is of less importance for some of the older members of the profession. For in these days of progress in positive medication it is necessary to keep abreast of all and everything of importance for alleviating and curing disease.

In my experience of twenty-three years as a general practitioner I have treated thousands of cases of whooping-cough by every available means. When I started out to practise, the remedies for this affection were belladonna, bromides, nitric acid and horse-chestnut. These remedies had very little or no effect in controlling this disease, the only one of any value being belladonna.

Later on I used quinine, bromoform, phenic acid, and steam impregnated with creolin and thymol. Of these the phenic acid was best. Bromoform never did any good in my hands; in fact I found it a dangerous drug to use and discarded it altogether. Finally I got to using antipyrin and croton-chloral. In one very rebellious case I was forced to use chloroform inhalations for the external treatment. I have used the various sprays of solutions of cocaine, quinine, resorcin, benzol and antipyrin. Of the latter I found resorcin and antipyrin to act best for checking the vomiting. Internally I found dilute hydrocyanic acid very effective. For the after-coughs,

when the real disease was cured, I got good results from 1-2 to 1-grain doses of alum four or five times a day, for a year-old child.

Special Indications and How Met

However, during the last ten years I have had experience with many drugs, particularly the active principles, besides calcium sulphide and calcidin, and others. Following I give a list of the drugs I found beneficial, and the indications for each, namely:

For tight, harsh and dry cough: calcidin, apomorphine, emetin. For nervousness: codeine, cicutine, hyoscyamine. For the parasitic element: calcium sulphide to saturation. For catarrh: helenin. For spasm: monobromated camphor, atropine, hyoscyamine. For viscid sputa: scillitin. As a stimulating expectorant: ammonium carbonate, apomorphine, emetin. For functional heart trouble: cactin, digitalin, sparteine, strophanthin. For hemorrhages: ergotin, hydrastinine, stypticin, tannic acid, gallic acid. For stimulating the appetite: quassin. For debility: brucine, strychnine arsenate, iron arsenate, combined with nuclein. Among all the foregoing remedies will be found many that are useful, some of doubtful therapeutic value, while a few, if used early enough, will be found to have a specific action if pushed to full effect or dose enough.

My Most Successful Treatment

As for my own most successful treatment of this disease, I will quote from the chapter

on whooping-cough, in my book on "Diseases of Children," (page 44), as follows:

"For a child five years old begin and clean out, clean up and keep clean with calomel and saline laxative if deemed necessary. Keep the bowels free from toxins by giving the intestinal antiseptics in solution three times a day in dose enough to remove all odor.

For the abortion or cutting short of this disease begin by putting five granules of 1-250 grain of atropine sulphate into twenty-four teaspoonfuls of water, and give a teaspoonful four times a day or oftener until you get the dilated pupil, or in other words, its physiological effects; then reduce to the proper dose to maintain this effect. Put into another glass twenty-four teaspoonfuls of water and add twenty-four 1-6-grain granules of calcium sulphide. Of this give a teaspoonful every hour until saturation, then reduce but still keep on giving it to maintain its full effect in the system."

Keep up this treatment until your patient is cured. In the beginning of the treatment, if the patient has a hard, distressing cough,

you may add calcidin to the above treatment, for a few days, so as to loosen up the cough. Then stop the calcidin and give apomorphine in emetic doses every two or three days, if necessary, so as to get rid of the excessive mucus; but this will be found necessary

but rarely if treated with calcium sulphide to saturation.

As a local wash I find two menthol-compound tablets in a cup of water excellent as a spray; for the nose and throat this may be applied every two hours. For those who have a room to spare, I should advise that this be set aside throughout the disease for the sick-room, stripped of all unnecessary furniture, and fumigated with sulphur candles every morning, and aired out in

the evening. This will greatly aid in its cure. In favorable weather the patient is to be kept outdoors all day, while for those that can do so, a sojourn in the country or at the seashore is excellent. For fever give aconitine, and if complications arise, which will seldom occur under my plan of treatment, it will be self-evident that they must be treated accordingly.



DR. W. F. RADUE



Success?—Not Always

What Experience Has Shown Me About Failures

By **GEORGE L. SERVOSS, M. D., Fairview, Nevada**

DURING the past three or four years it has been my pleasure to report a few of my successes through CLINICAL MEDICINE, and some of my brother practitioners have asked me whether I have always met with success in the use of the active principles. When I have had a full history of a case, yes. On a few occasions, when the entire truth had not been forthcoming, no. But this has not been due to the insufficiency of the active principles; for when I adjusted the history to the truth and then applied the proper agents to the conditions as they actually were instead of what they were said to be, I have seen but few failures.

Chronic Myalgia—and Alcoholism

I have in mind a case of chronic myalgia in which the muscles of the back were involved and in which laboratory tests showed acidemia, where treatment produced some improvement but not full recovery. This patient, in reply to questions, told me that he used very little if any alcoholic liquors. I based my treatment on that as a fact. Later I found that he did use such liquors, and when he reproached me because of my non-success in his case, I informed him that he could anticipate no results of a satisfactory nature as long as he continued to indulge in alcoholics. He concluded that I might be right, and after withholding from such beverages for a time, sufficient for me to overcome the acidemic condition, success followed in what at first looked like failure.

Misinformation Leads to Failure

Recently a gentleman came to my office and consulted me about his wife. He said that she had a baby three months previously; had been well for about six weeks after the birth of the child and while still in Cali-

fornia at her old home, but after returning to her home in Fairview and assuming her household duties she began to weaken, and for several days prior to this she had been having fainting "spells" and seemed to have no energy to go on with her work. The husband said that the warm weather seemed to augment this abnormal condition. I questioned him closely as to her condition otherwise, but could get nothing further, which led me to suspect that this was nothing other than a case of lack of tone, due to a combination of rather hard work, nursing one baby and taking care of two other children not much more than babies. I asked him as to her condition following other pregnancies, and he said that she had always been well, both before and after the birth of the children. At this time he said nothing of any actions on the part of his wife which could have been construed as out of the ordinary.

For the conditions pictured I put the patient on the triple arsenates with nuclein, and for a slight constipation, which the husband spoke of, I gave the phenolphthalein compound. For several days I heard nothing further of the case, and presumed that everything was progressing nicely, when one morning I received a hurly-call, to which I responded within half an hour.

On my arrival at the house I found the woman propped up in bed eating breakfast, seemingly in normal condition. The husband informed me that she had wanted to get up at the regular hour of half past five, but as he had no work to do he wanted her to stay a little longer, and from her story as well as his own, he used gentle force to make her remain in bed. I understood, from what both said, that she became excited and angry, and when I saw her, her pulse was still accelerated, this being the

only apparent symptom that there might be anything out of the ordinary.

"Those Spells" Prove to Be Insanity

No further history was obtained at this time, although I made it a point to ask questions as to what had happened. The husband said that she had had another of those "spells," and I presumed that he meant the sort he had described in his previous interview. I told them to continue the treatment as suggested at first. Later in the day, as I heard a day after, she had more "spells," but I was not called. That night she had still more "spells," also some on the following day, but at no time was I advised of such condition or called when the spasm occurred. Consequently I did not see her excepting when everything was apparently normal.

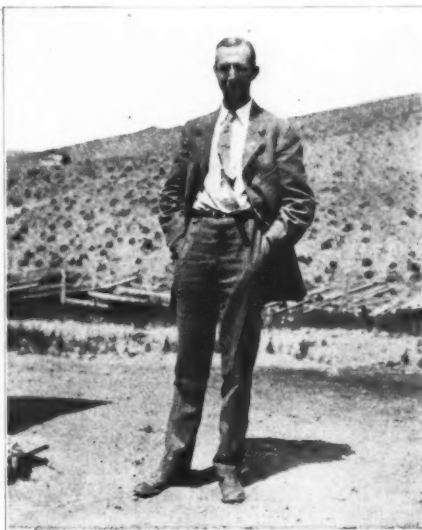
On the evening of the second day after my morning visit a doctor was called from an adjoining railroad town, the idea of calling him being to have someone to take her to the railroad and start her for her California home. This practitioner was told the real truth, namely, that the woman had been acting queerly for several weeks and that, instead of fainting, she had been having spasmodic fits from time to time and that her husband was fearful that she was becoming insane. She was taken to the train the following morning, after which the nurse in charge gave me a complete and truthful history of the case. Then I readily saw wherein I had failed of success. Here was a case for cicutine and other sedatives rather than excitants like strychnine. Hyoscine was indicated, as were the bromides or solanine; but not having the correct and truthful history of the case, I based my line of treatment upon wrong conclusions, and naturally met with signal failure.

Get Down to the Bottom—to the Truth

These are two cases, both of which convey lessons which no practitioner should overlook. They have taught me never to come to any conclusion until I have either seen the patient or pinned him down to the absolute truth. In the first case, when I had

discovered that the patient had lied, and when I had shown him that if he continued in the use of alcoholics he need expect but little if any improvement, failure was followed by success. In the second case I learned not to pass over fainting "spells" without questioning closely as to their absolute character.

In neither of these instances did the active principles fail of action. In the first they



DR. GEORGE L. SERVOS

were partially satisfactory at all times, and wholly so after other conditions, opposed to their action, were removed. In the second case the remedies were active in augmenting the already existing conditions, as the strychnine in the triple arsenates was contraindicated under the actual state of affairs. I have had other cases, similar to the last one mentioned, in which the whole, the truthful history was given, in which cicutine and hyoscine gave the desired results; and I believe that had the absolute truth been forthcoming I should have obtained satisfactory and immediate results in the case in question had I not been working in the dark.

The outcome of cases like the one last mentioned is a thing that not infrequently

works a hardship upon a doctor, as the layman is prone to base an opinion upon what he hears of the case and not upon the truths as they exist; and the practitioner would better spend a little time getting a full and truthful history, rather than take the word of anyone as to existing conditions.

I will add that the patient was kept in the railroad town for a few days and steadily grew worse, but immediately upon her return to California and her relatives there was a change for the better, and I have recently heard that there has been a complete recovery. I believe that this case, upon information gained from outside sources, was one of assumed mania. The woman did not like life in a Nevada mining camp and wanted to go back to her old home in

California, and knowing that there was such a thing as postdelivery insanity, she simulated that condition and gained her ends thereby, as my informant regarding her condition after returning to California informed me that she had required but little medical attention to bring about improvement, if not complete recovery. Nevertheless it was a failure on my part, and I accept it as such, and would warn other, and possibly younger, doctors always to look closely to the complete and truthful history in every case coming under observation. I would say, in passing, that I had no previous acquaintance with the patient and consequently did not see that her actions were other than normal, while I was not advised to the contrary, either by her husband or the nurse.

Circumcision

How to Perform It Under Local Anesthesia

By **BENJAMIN H. BREAKSTONE, B. S., M. D., Chicago, Illinois**

Professor of Principles of Surgery and Clinical Surgery, Bennett Medical College; Consulting Surgeon, Mary Thompson Hospital for Women and Children; Attending Surgeon, Jefferson Park Hospital.

EDITORIAL NOTE.—The surgery that the general practitioner can do himself, in his own office, under local anesthesia and with a minimum of after-discomfort is the kind in which he should have the maximum of interest. This is the kind of surgery which actually pays him—and not some one else. This is the kind of surgery that Dr. Breakstone is teaching, using simple language, explicit directions as to technic, and beautiful illustrations which make the details plain. This paper on "Circumcision" will be followed by others on equally interesting and important subjects.

THERE is perhaps no operation so beneficial to humanity as circumcision ("History of Circumcision," by Remondino), yet I have rarely seen this operation perfectly performed, even by surgeons of more than ordinary reputation.

The old operation as laid down by Moses consisted of three steps, viz.: "Chituch," or cutting; secondly, "preah," or tearing back the mucous membrane; and "met-zitzah," or control of hemorrhage. I think it is worth while to be acquainted with this operation as it is done by the "mohelim" (Jewish circumcisers).

The first step is done with a sharp, razor-like knife, which knife must be especially prepared, and must be smooth, so as to cut smoothly and almost painlessly. The "mohel" takes the foreskin with the thumb and index-finger of the left hand, while with this knife, or "cholef," as it is called, he cuts off the prepuce from the dorsum of the penis downward and forward with his right hand, in an oblique manner, so as to avoid injuring the frenal artery. Then with his two thumb-nails he takes hold of the dorsal part of the remaining mucous membrane which still covers the glans, and

in the median line tears this membrane back with his nails to the corona glandis. Then, as the third step of the operation (which was formerly done by the operator sucking the blood with his mouth, and later with a glass tube, and still later with a glass tube to which was attached a rubber bulb), the blood is drawn, with sponges, from the wound so as to prevent edema, and at the same time the cut ends are washed by this blood and in that way any infected material is removed. In many countries this part of the operation is prohibited by law to be done with the operator's mouth, and the up-to-date "mohelim" use, for this purpose, sponges dipped in an aseptic solution.

It is remarkable to note here how very few infections follow this operation as performed by these "mohelim," even though it is done without any regard to asepsis. Their results, however, are much better than those obtained by most surgeons for the reason that these "mohelim" are better acquainted with the anatomy of the part and the technic of the operation than are most surgeons.

A circumcision, to be perfect, must give such a result as will make it impossible to reproduce the foreskin, even by manipulation. Most patients, after a circumcision, have redundant skin at the frenum, and such is the case in many instances even after the operation has been performed by "mohelim."

The most intelligent people very often have "mohelim" circumcise their children rather than have a surgeon do it, although a surgeon should be more competent. The reason for this is that our colleges have been so occupied with laparotomies and other major operations that it is beneath the dig-

nity of our average professor of surgery to teach circumcision; and thus discredit is thrown on the ability of our whole profession.

That many circumcisions are imperfectly performed, even by "mohelim," was proven at the time when the Jews were driven from Rome.

The only sign of recognition of a Jew then was his circumcision, and many Jews were enabled by manipulation to reproduce the prepuce, and so escaped expulsion.

Many patients who require circumcision do not have it done for the reason that they cannot remain away from their occupation, and for the further reasons that they fear the anesthetic and the pain. However, this operation can easily be done at the physician's office without causing pain, without a general anesthetic, and without loss of time, on the part of the patient, from his occupation. I will not, in this place, discuss the indications for circumcision.

The Avoidance of Pain

The first essential in posthectomy is the avoiding of pain, and for this purpose cocaine



DR. BENJAMIN H. BREAKSTONE

is employed. The penis is aseptized in the usual way, then a rubber band is placed rather tightly at the root of the penis, to control hemorrhage and to prevent systemic absorption of cocaine, as is shown in Figure 1. Then a sterile towel is placed on each side of the penis, and the two are pinned together so that nothing is exposed save the penis alone. The cocaine is then injected round about the middle of the penis, at right angles to the long axis (Fig. 2), so that

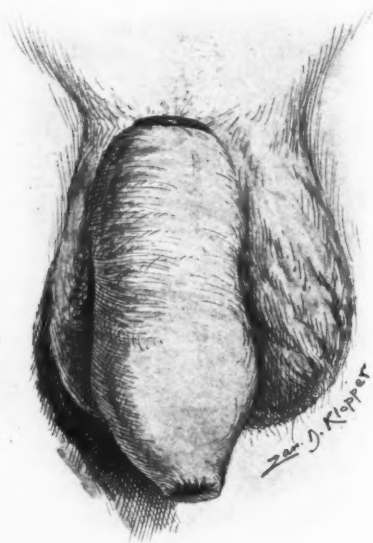


Fig. 1. Showing rubber band at base of penis acting as Esmarch constrictor to prevent hemorrhage during operation and to prevent absorption of anesthetic solution

when cocainization is complete there will be a ring of edema around the middle of the organ, as is shown in Figure 3. The most pain is felt at the frenum, so that the next step is to inject a little cocaine deeply into the latter.

The amount of cocaine used varies from two to five syringefuls of a 2-percent solution, and hence the number of punctures made varies from two to five. The cocaine is drawn up into the syringe, the air is expelled, and then a puncture is made just beneath the skin, the needle being pushed in

its entire length. Then, as the needle is withdrawn, the piston is pushed down so that half of the cocaine solution is emptied gradually beneath the skin. Then, as the point of the needle comes near the surface,

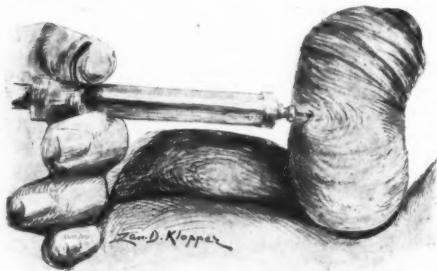


Fig. 2. Showing where and how to introduce hypodermic needle with anesthetic solution

the needle is pushed in the opposite direction and the remainder of the contents injected in a similar manner there. After two or three such injections, sometimes perhaps four or five, there is a complete ring of edema around the penis as shown in Fig. 3.

Now, while the cocaine is taking effect, which is in from fifteen to twenty-five minutes, the instruments are prepared and the surgeon again aseptizes himself in the usual way, avoiding the use of any strong



Fig. 3. Showing area of edema around middle of body of penis after introduction of anesthetic solution

antiseptics. I myself usually use boric-acid solution or normal salt solution, finishing up with alcohol. The same procedure is gone through with on the penis.

The instruments required are scissors and needle. Sometimes a tissue-forceps (with-

out teeth), and for beginners a V-shaped clamp or guard, is useful to prevent any part of the glans from being injured. The forceps-clamp should never be used unless the parts are cut off on the side nearer to the organ, for otherwise the edges of the wound will be lacerated and irregular, and will not heal readily. This is also a cause for edema and infection following the operation. It is well to have ready several artery-forceps.

First Steps of the Operation

The prepuce is taken with the thumb, index- and middle finger of the left hand, and if a guard or clamp is used, it is placed in the V-shaped slit and then, with a knife or scissors, is cut off. If a clamp is not used, the prepuce must be pulled away from the penis and the scissors hugs the fingers of the left hand as it cuts the prepuce off obliquely



Fig. 4. Prepuce, held with thumb and index-finger of left hand, pulled away from glans, and scissors — hugging fingers and cutting obliquely downward and outward

downward and forward from the dorsum, as shown in Figure 4.

The skin remaining then recedes back of the glans and the latter remains covered by the mucous membrane, as shown in Fig. 5. Then, with a scissors, the mucous

membrane is slit on the dorsum in the median line back to within one-eighth to one-fourth of an inch of the corona glandis, as is shown in Figure 5.



Fig. 5. Skin has receded back of glans; median slit in mucous membrane to corona glandis

Next the mucous membrane is trimmed all around the penis to within one-eighth of an inch of the corona glandis, except at the frenum, where, to avoid injury of the frenal artery, a little triangle is left which is one-



Fig. 6. Method of trimming mucous membrane all around glans, parallel to and within one-fourth inch of corona glandis

fourth to one-third of an inch in its altitude from the median line of the under surface of the corona glandis, as shown in Figs. 6 and 7. Only just so much of the mucous membrane should be left as is necessary for the sutures to take hold. If we leave too much mucous membrane the entire prepuce may be re-



Fig. 7. Mucous membrane and skin ready for suturing; also triangle left at frenum

produced by manipulation. If, however, less than one-third of an inch is left, then it is impossible to do so.

Putting in the Stitches

To perfect our coaptation between the cut ends of the remaining skin and the mucous membrane, a corresponding triangle is excised from the under side of the skin, as is shown in Figure 7. Then horsehair stitches are used for coaptation. These sutures must not be tied too tightly.

The number of sutures used varies in different individuals. In very young children not more than two or three are necessary. In adults from eight to fifteen is the usual rule; but a sufficient number should be put in to insure perfect coaptation (Fig. 8).



Fig. 8. Showing sutures applied

Horsehair is used because it is easily sterilized, not easily infected, is quite elastic, and never cuts through unless by very great tension, as post-operative priapism. In very young children catgut may be used so as to avoid removing the stitches later. In adults, however, this is not advisable, owing to the susceptibility of catgut to infection and the too rapid absorption, especially should erection occur. It is well to have prepared some fine catgut (No. 1 or 2), so that if perchance the frenal artery is cut, it may at once be ligated.

After the sutures are all applied, with the exception of one, the rubber band is removed and the wound is allowed to bleed freely for several minutes. This sometimes re-



Fig. 9. Method of dressing wound

quires manipulation from the root of the penis forward with sponges wrung out of very hot boric-acid solution. When the bleeding has entirely ceased and the edema due to the cocaine solution completely disappeared, the wound is powdered with boric acid or any aseptic powder. Then, while the tip of the glans penis is held upward with the thumb and index-finger of the left hand, a sterile one-inch gauze bandage is applied from the tip of the glans penis to the root snugly around the entire penis, leaving the meatus exposed (Fig. 9). Next a narrow strip of adhesive plaster is wound around the outside of this bandage so that it will keep it in place. This allows the patient to urinate without soiling the dressing. In children vaseline is applied around the edges

of this dressing to prevent urine from saturating it. In adults, however, neither greasy nor moist dressings whatsoever should be applied, as such measures are very prone to cause erections.

In some instances there is a little pain after the operation, and for these patients 20 grains of sodium bromide with 6 drops of Magendie's solution is given, to be repeated in one hour if the pain has not entirely ceased.

If the circumcision has been performed in the presence of an acute urethritis, then hexamethylene-tetramine (i. e., urotropin) in doses of 7 1-2 grains (followed by two glasses of water) three times a day after meals is

given. The wound is not redressed, provided it remains dry, for eight or nine days, when the sutures are removed and a similar dressing is applied, the latter remaining on for four or five days. When that has been removed the patient is discharged.

In my experience, in the past eight years, I have not had a single case of infection, even though the operation was performed for phimosis or paraphimosis due to gonorrheal balanoposthitis or chancroid. Several cases of chronic anterior specific urethritis have been cured by circumcision, and the reason is that a tight prepuce has not allowed complete drainage of the gonorrheal discharge before this operation was performed.

The Prevention of Lacerations in Labor

With a Record of Personal Experience

By W. W. EASTBURN, M. D., Sigourney, Iowa

LACERATIONS of the os uteri occur probably as frequently as of the perineum and are at least of equal importance because more difficult to repair. Occasionally laceration of both occurs in the same patient, which very seriously complicates the case and makes it more difficult to get the best results in repairing the damage.

"Prevention" is better than "cure," and the object of the present paper is in a humble way to call attention to the fact that these injuries occur sometimes when with a little more precaution, a little more watchfulness, and greater readiness to meet emergencies, they could have been prevented. In my limited experience in obstetrical work in the past few years I have proven to my own satisfaction that this is true. In preserving the integrity of the parts, not only the patient is saved a great deal of suffering, but serious complications, the absorption of septic material, and a tardy, lingering puerperium may often be avoided. And we shall have accomplished some good in the world and taken a long stride in the direction of fulfilling the mission of our profession if by any

act of ours we save one woman in labor even one single hour of agony—and God knows her suffering on these occasions, modify it as we may, is hard enough to bear.

Modifying the Pains of Childbirth

This brings me to the real subject of this paper, namely, the best method of modifying the pains incident to childbirth and at the same time assist to preserve the continuity of the parts involved. For years past chloroform has been resorted to for this purpose, to a greater or lesser extent, by a large number of physicians, but in my hands it has never been very satisfactory. Often it could not be used at all; then, again, pains would cease altogether for the time being if the patient had received a little more than was intended.

A few years ago the hypodermic anesthetic, hyoscine, morphine and cactin, was introduced, and I noticed reports given out by different physicians as to their experiments in its use in labor. This led me to try it in my own cases, and in nearly every instance with gratifying results. This combination has proven far more satisfactory than any-

thing I have ever tried for the purpose under discussion.

I know there is a wide-spread feeling among some physicians against the use of the hyoscine, morphine and cactin combination for any purpose, but I must admit I do not share this. I find the better way is to give new methods and combinations at least a thorough trial before condemning.

Of course this preparation must be used with caution, like all the potent and pain-relieving alkaloids, and the patient's general condition, especially as to heart action and respiration, be looked to first. But I have never had any bad effects from its use, and I know it has accomplished much good. In almost every instance it has modified the agony and made labor easier to the mother. "Agony" is purposely chosen here, for there is no other term that to me expresses all that these women are passing through.

How to Use the Anesthetic

The way I administer H-M-C on these occasions is somewhat as follows: When the first stage of labor is merging into the second and the pains are growing more and more severe and harder to bear; when the "agony" is developing, if you please, and the patient, especially if a primipara, begins to manifest serious nervous disturbance, then I give from 1-8 to 1-4 of a standard dose, reinforced with 1-100 to 1-50 of either strychnine, nitroglycerin or digitalin. As a result, the patient, from crying, throwing her arms, or tossing about, soon quiets down, sleeps between pains, and behaves in a natural manner. The nervous symptoms disappear and as a rule do not return. The effect of the first dose often lasts three or four hours, and sometimes through the completion of the second stage. If this stage is prolonged unusually, a second 1-8 dose of H-M-C may be given; but often the first dose is sufficient.

Here is where the physician's judgment comes into play, and the patient's condition, and the length of the second stage will decide this point. True, when we thus modify the pains, the uterine contractions do not have quite as much expulsive force,

yet contractions continue even during sleep, as will be shown in the advancement of the head downward, by examination from time to time.

Aid Given By the Physician

This is when the good is accomplished, especially in cases of first labor. The head is forced more slowly down against a partially dilated and maybe a rigid os, and on to the perineum. These parts have more time, under the relaxing effect of the partial anesthesia, to expand and to adapt themselves to the new requirements. Great good may be accomplished at this stage by giving manual assistance in the dilation of the parts as the head descends. In this way much can be done toward helping nature to prepare the parts for the delivery of the head. When the head is delivered, and before another expulsive pain comes on, the finger may be passed up posteriorly and hooked into the axilla, bringing the shoulder down over the perineum before the other shoulder passes out from under the pubic arch. For often the perineum will be torn by the shoulder after the head has been safely passed.

These efforts to prevent all the suffering you can, on the part of your patient, and to save the parts, may keep you a little longer on the case; not as long, however, as he must remain who finds himself obliged to repair damages after the rest of the struggle is over. In this connection I may be permitted to adduce one illustration:

An Illustrative Case

Mrs. S., aged 18, of rather slender build, weight ordinarily from 125 to 135 pounds, after a period of gestation of about 320 days (possibly longer), was confined January 31, 1909. This lacked six days of being six months from the time she first felt movements. This was her first pregnancy. Labor began in the early hours of the morning and I arrived about 6 o'clock.

Everything went along about normally, until the first stage was well advanced and suffering and nervousness were well marked, when I gave the first hypodermic of H-M-C—I think 1-4 dose. The effect was soon

noticeable, her nervousness disappearing. She stood the pains well, and slept some during the intervals. I could notice the contractions were doing their work, the head was slowly descending, and shortly after noon dilatation was complete. The head in time gradually began to press upon the perineum and the caput succedaneum to make its appearance in the outer world. Then I began to realize the great dimensions of the head, and I confess I was frightened. It seemed to me the head could not pass without causing a fearful tear, and maybe the whole floor would have to go. All this time the woman was bearing the pains well and resting between. I took notice that toward the end the effect of the narcotic was wearing off, but there was no need of repeating the dose.

After my scare at the size of the head and the firmness of the parietal and frontal bones I put in the time faithfully anointing and dilating the perineum; as the pains came and went, the head advanced just a little farther each time, and the length of time I

was able to keep it in the inferior strait helped me very much in my efforts; and by the time the final pain came I was ready for it. When the head was through, it was close work to get the finger up in the axilla of the lower arm, but I succeeded in getting that shoulder over the perineum before allowing the other to pass from under the pubic arch.

Then the tug of war was over, and I myself was surprised at the result. I had succeeded in delivering that little woman of a 16-pound child without even a little tear. A great deal of the credit for this achievement I give to H-M-C.

To sum up, I would recommend H-M-C to those who do not use it, for these reasons:

1. It makes the pains bearable to the mother.
2. By its anesthetic effect it relaxes and permits more complete dilatation.
3. It soothes and quiets the nervousness of the primipara.

I should not want to undertake a case of labor if I could not have H-M-C with me.

A Loose-Leaf Ledger System for Physicians' Accounts

A Simple Method Devised by the Author

By E. GARD EDWARDS, M. D., La Junta, Colorado

IF the average business man kept his accounts as does the average physician, our courts would be running overtime on bankruptcy proceedings, for of all the slipshod, antiquated methods of bookkeeping those followed by the medical profession will easily take first prize.

Not many years ago it was quite the proper thing for a physician to be lax in keeping accounts, a businesslike doctor being looked upon as a curiosity. Like as not, the average physician, when asked for a statement, would scratch his head and say, "Oh well, as a matter of fact I forgot to keep track of your work, but we will call it 'fifty.'"

This was all right for the debtor, but it did not furnish the funds for the boy at college nor provide, after the physician's death, for his family; yet, when the easy-going practician shuffled off this mortal coil, it was wondrous strange to the neighbors that "Doc" Jones left nothing for the sorrowing family except a long list of ledger accounts, which no court of law would stand behind if the debtors chose to dispute—which they frequently did.

A Pressing Need for System

Possibly in time back, when most anything would do in the line of offices and equipment, there was not such a pressing need of

business methods in practice. But now it is different.

No longer can the physician jog around in a one-horse shay; where formerly a 10 X 12 office would suffice the general practitioner, he must now have three or four rooms, and he needs must be able to say that he has not been remiss in following up postgraduate work, besides a thousand and one other things, which cost money. All these take of the coin of the realm a considerable. So, too, it nowadays costs more to support the family.

Hence it behooves the average easy-going practitioner to reform his lax methods of charging and collecting and at the same time to have a system of keeping accounts that will consume little time, be acceptable as a legal claim in a court of law, not too expensive to inaugurate, and one that can be kept in an ordinary safe for protection from fire.

To meet this demand, many schemes have been brought to the attention of the profession. Most of these are a combined record and account sheet, or else a combination of intricate cards and desks that are sold at exorbitant prices and have the great objection that they cannot be stored for protection from fire except in vaults.

the drawbacks. It is built up on the loose-leaf ledger system and comprises

1. Memorandum pad
2. Day slips
3. Two loose-leaf ledgers:
 - a) For live accounts
 - b) For dead accounts

The Memorandum Pad

The memorandum pad is any desk pad such as is in common use. The first leaf is used for a cash slip, and the second as a charge slip. For convenience, the calls are arranged as follows:

First column: Office calls (already appointed).

First column (under ruling): Office calls (new).

Second column: Office calls (may be in). This column keeps track of such of your office patients as you may have asked to return if not improved.

Third column: House calls (already appointed).

Third column (under ruling): House calls (new).

Fourth column: House calls (may be necessary to visit).

Such a page would look like this:

1910 ^{69⁴⁵} JULY 1910

JULY						
S	M	T	W	T	F	S
						1
						2
						3
						4
						5
						6
						7
						8
						9
						10
						11
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						31

2 SATURDAY

Nalstead E. P. cash 10.00
 Smith, O. G. By acct 6.45
 Adams C. D. Cash 1.00
 Ormsley, J. V. " 52.00

Memorandum slip 1

It is my purpose to outline for my fellow physicians a system of accounting that seems to combine quite a number of the essential features enumerated, while free from most of

348.00

7-2-10

James ^{ne}	Hodge ²	Selma ²	Hight ²
Williams ²	Earle ^{ne}	Dunbar ²	
Eaton ²	Thomas ³		
Dunlap ²	Lauder ^{ne}		
Parker ²	Briggs ²		
Clarke ¹	Bradley ^{ne}		
Bradley ⁵	Seating ^{ne}		
	Jones ²		
	Rex ¹⁵		
	Price ⁵		
	Cons. B. Parley		

Memorandum slip 2

A LOOSE-LEAF LEDGER SYSTEM FOR PHYSICIANS' ACCOUNTS 1085

At the end of the day a check (thus ✓) shows you have seen the patient. If you have called Dr. Perley in consultation at Jones', you would note "O" at his name on the memorandum pad; and at the end of the day, "O Consul. Dr. Perley \$5.00." This, unless Dr. Perley was to render his bill direct to the patient. If not, it would appear against Mr. Jones on your ledger slip, directly under your own charge for the day. James being a case for which one charge for the course of treatment was

memorandum only; details are not mentioned.

Day Slips

From the memorandum pad your day slips are made up. These are on cardboard or heavy paper, 4½ by 8½ inches in size. I prefer the latter as occupying less space. Two copies are made, one for the safe and one for your desk drawer. Debits are on one side and the Credits on the other. The slip as finished would read:

1910	
\$ 48.00	TOTAL \$ 101.50
July 1st	2nd.
E. Gard Edwards, M. D.	
DEBITS	
James, R.V.	och nc
Williams, W.	osn 1.00
Eaton, C.T.	os S. Dres. 2.00
Dunlap, D.D.	ow gyn. 2.00
Parker, E.G.	od X-Ray 2.00

Day slip 1

originally made is marked "nc." Earle called you on the 'phone to report but no prescription was given, and hence no charge, so he is checked with "x." Of your house calls, Barclay and Sistine were seen, no charge being made for the same reason as in the case of James.

After the day's work, your memorandums for the following and succeeding days are made. For instance: James, Williams, Clarke, Eaton, are all entered on the memorandum for the next day's office appointments. Hodge and Bradley may need to return and are entered in the second column. Dunlap and Parker are discharged. On your house calls, you have noted that Silver, Dunbar, Laufer and Briggs are to be called upon at home and that Rex and Barclay may need you again (the visits have been left subject to call). Sistine, Pierce, High, are dropped, your services no longer being needed. Opposite each name on this day you have placed the charge. This being a

1910	
\$ 69.45	TOTAL \$ 125.95
July 1st	2nd.
E. Gard Edwards, M. D.	
CREDITS	
Halstead, F.P.	cash \$10.00
Smith, P.G.	" 6.45
Adams, C.D.	" 1.00
Ormsley, F.V.	By account 52.00

Day slip 2

On the day slips these abbreviations are used:

O for office; h for house; s for self; w for wife; sn for son; d for daughter; m for mother; obstet. for obstetrics; x. r. for x-ray treatment; g. u. for genitourinary; gyn. for gynecology; p. e. for physical examination; s. i. for serum injection; e. t. for electrical treatment; spec. for special; n. v. for night visit. Others may be adopted as needed.

Ledger Sheet

Figure 3 shows the ledger sheet reduced, the original being 7½ × 11 inches. This provides for name, address and occupation of the debtor. The notations are self-explanatory.

When an account is closed, the sheet is removed and filed in a desk drawer, marked "Accounts Settled." It is used again should the party open an account anew at any time during the year. On the first day of Jan-

Statement 2/13/10

City 4th St. and 1st Ave. Jones, E. J. Richardson

Month	Day	Office or House	To Whom Rendered	Kind of Service	S	C	S	C	S	C
Jan.	1			Receipt for Cash Bal. due	16	50				
July	9	h	w	Tricarrage	15	00				
	10				22					
	15				22					
Mar.	15			Goods			31	50		
July	2	h	ch	Road & Carriage	2	00				
					5	00				

Remarks

FIG. 3. LEDGER SHEET

uary all unpaid accounts are removed and filed in the safe, a new sheet being used, inscribed: "January 1, 19—. Balance Due."

The date on which statements have been rendered can be noted at the top of the sheet, should one so desire, and notations made under "Remarks," as to the patient's credit or financial standing.

In order to keep all accounts in the ledger "live ones," two books are used. In this particular locality I have the "live" ledger with sets of alphabetic index markers under the following heads:

City Accounts
Railroad Accounts
Country Accounts
Out-of-Town Accounts
Notes

Counter Accounts. (Here are kept accounts of such people as have accounts against me.)

Settlement Deferred. (Such accounts as are slow but which I do not care to leave for collection.)

Using such a division of accounts, a sheet can be shifted around from one division to another as change of occupation or residence may demand.

The second ledger is divided as follows:

Suits
Judgments
Disputed Accounts
Collections:
City

Out of Town
Address Unknown
No Good

These divisions explaining themselves, they require no further attention.

It will be seen at a glance that no bad accounts, except a possible few in the settlement deferred, are carried on the first ledger—a big advantage to a careful man,

as he can more easily keep track of his bills receivable, in estimating his financial standing at any time.

System Not Copyrighted

Every system yet devised, so far as the writer has seen, is open to some criticisms, but I believe this particular one is of practical value and has a minimum of faults. It has been tested for a number of years, and in my own case at least has proven

entirely satisfactory. As this has not been copyrighted, anyone can avail himself of the outfit through any of the loose-leaf-ledger supply houses. The ledgers are not expensive and will last a lifetime. The ledger sheets can be purchased for \$7.50 per thousand, and the day-slips at \$2.50 for 750, this number allowing two sets for the year and a few for waste. The pad is, of course, the usual desk pad, purchasable at any stationer's.

System for the General Practitioner

Practical Advice for the Business Side of Medicine

By J. WILLIAM WATSON, A. M., M. D., South Braintree, Mass.

EDITORIAL NOTE.—Success in medicine depends upon something more than knowledge and technical training. The knowledge must be systematized, so as to be usable; the technical skill must be added to by observation and study. These things involve order in the physician's office, in the collection and preservation of his literature, in the preparation and filing of his case reports, and finally—and by no means of least importance—the keeping of his accounts. Many a man has failed primarily from lack of system. Every doctor needs to make it a study—and it is help along these lines that Dr. Watson offers in the article which follows.

PHYSICIANS are usually the "butt of ridicule" because of their lack of knowledge in business methods. In fact, they are, as a rule, neither practical nor methodical. Now and then we find a brilliant light, but almost invariably learn later that he leaves the profession for the mercantile world and makes his millions. For example, Dr. Pearsons, now a nonagenarian, practised medicine for seven years, sold out (for he and his wife thought that he was fitted for something better than medicine), went into the real-estate business, made his million, and is now having lots of pleasure doing good with it. The mind is bright enough, but it lacks thought and training along these lines. Dr. Bell, the inventor of the telephone, was no business man, but the mind that produced and perfected so useful an article, especially to physicians, was that of a genius.

Medicine a Business as Well as a Profession

The practice of medicine is a business as well as a profession. We sell cures and

endeavor to give satisfaction. On these two things our success depends, for our happy patients tell their acquaintances and thus we are quietly but powerfully advertised. There are quite a number of very successful business houses which advertise in no other way.

Every successful person makes a strong point of system. Everything is arranged to go like clockwork. In this way a tremendous amount of work can be accomplished with seeming ease. It would be well for us physicians to visit some of our first-class mercantile houses and see how their business is conducted. Such houses always succeed. It is a "slipshod," loose method that courts failure.

The general practitioner's hours are so irregular that it is almost impossible for him to reduce everything to a system. He can, however, make out a plan and try to follow it as closely as possible. Sleep and food should be carefully considered. The former is more important than the latter, for one cannot go without sleep as long as he can

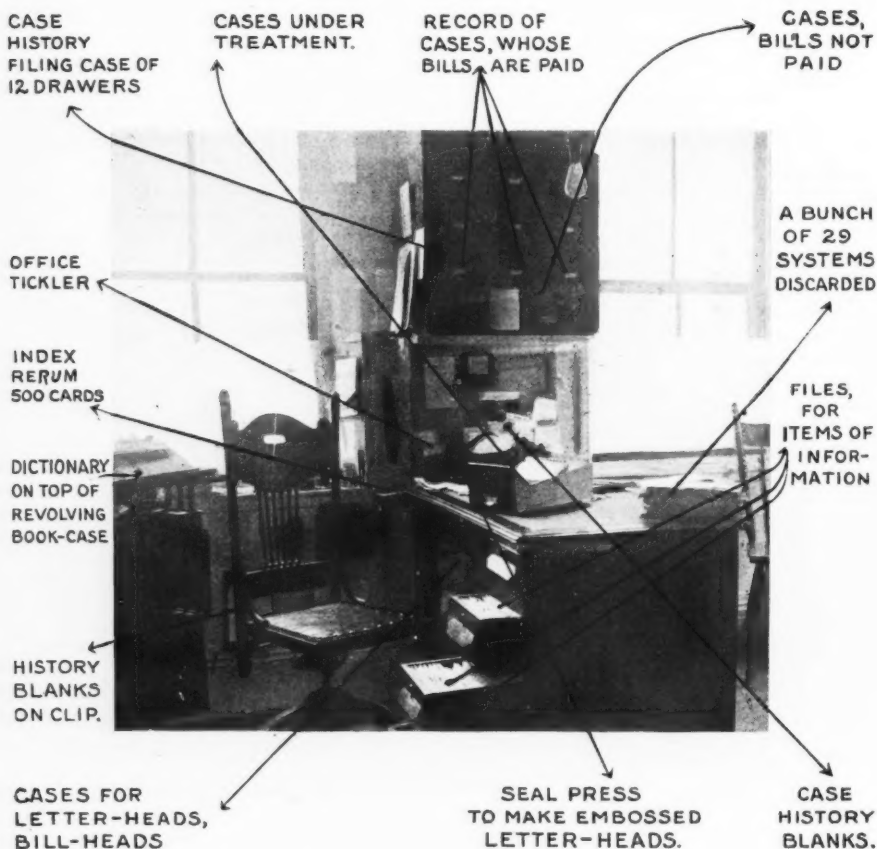


Fig. 1. Labor-saving arrangement

without food, and this cannot be well digested when one is tired.

Many physicians do their best work in the morning and that, too, on an empty stomach. They claim that in this way they are less apt to contract colds or diseases simply because the blood is not using up its energy to digest the breakfast, but is phagocytizing the germs that come to you in your calls. Well, it looks reasonable, but each physician must act on this according to his best judgment. However, these two points carefully considered will do much to preserve health and to make a long and useful life possible.

Elsewhere the physician's equipment has received deliberate attention, but what does

this amount to unless he is master of the occasion and is able to meet it with a skilled hand? It is always a good plan to systematize your thoughts. In other words, always picture a case in your mind's eye in its worst-possible condition and think what you would do under such conditions. With such mental training you are not so apt to be nervous and do things that you might be sorry for afterward.

Be Prepared for the Emergencies

The physician must always be ready and on the alert for all emergencies. To this end it is always well to have a hypodermic syringe in your pocket with the necessary

quickly soluble tablets. Where *he* goes *they* must go too. For general work there should be a medicine-case packed with the things that you are apt to need in your locality. There should be an accident-bag always packed and ready for instant use. Most physicians have an obstetrical bag. Its contents should constantly be kept sterile. The wise and careful physician will always sterilize the contents of this bag after every confinement, including with this also the dressings of the accident-bag. Have everything arranged in your office so that you can lay your hands on it at a moment's notice—alphabetical arrangement for drugs and a similar one for your instruments and dressings. Many of these points have been especially enlarged upon from time to time in the various medical journals.

Every business house is progressive. Its knowledge is systematized so that up-to-date methods are easily referred to in properly arranged files. All the details of the business are within reach of the hand. Such labor-saving schemes should be imitated and worked out to the advantage of physicians. In the illustration (Fig. 1) is shown the attempt that I have made along the line of labor-saving devices.

This is the result of ten-years' experience with systems. My only regret is that I did not know of this scheme in the early days of my practice as much valuable information and time could have been saved thereby.

The Office Conveniences

On the extreme left of the desk is an open drawer, with inside measurements of $8 \times 3 \times 2$ 1-2 inches containing 500 cards 3×2 1-2 inches separated by a 54-piece

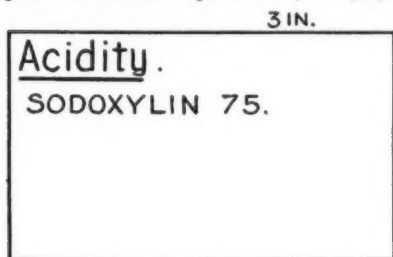


Fig. 2. Index rerum card

alphabetical index. This is my Index Rerum. On the top of each card is written a heading, below which is information on that subject. For example, the first card that I pick out reads as shown in illustration.

This means that sodoxylin is good for acidity. Look in folder No. 75 for the information. Should the same be a book or magazine it would be so stated either on the above card or on another card in the folder. Or the whole matter that impressed you might be put on either of these cards.

The folder is made of manilla tag cardboard, $8\frac{7}{8} \times 9$ inches, and folded once

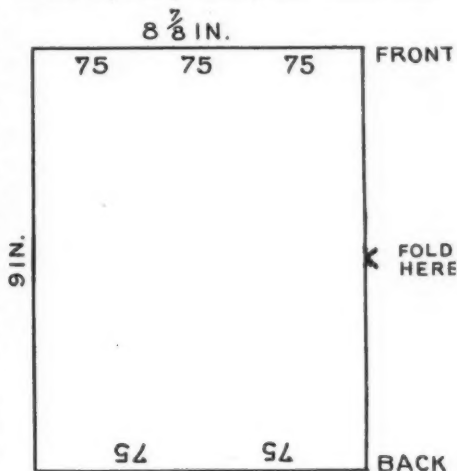


Fig. 3. Folder for index rerum

in the middle, with a clip or a rubber band to hold it together. The folder is numbered as shown in the cut (Fig. 3), so that it can be easily read from both sides.

Every slip, clipping or item bears the same number that is on the folder, so that they can always be returned to the proper folder of the same number. It is a good idea to put similar subjects in the same folder, as a matter of convenience, but this is not necessary as you can put any subject in any folder as long as you know, from your index, where it is.

Preservation of Journals and Articles

It is not always wise to preserve every journal you subscribe for, a better plan be-

ing to cut out articles that appeal to you and file them as above. Journals and bound volumes take up a great deal of room. The above plan will save space and at the same

except the very last half in the final number, which is used as a back cover to your bound volume. All this can be done in about half an hour, and anyone can do it for you. In the next act the physician must show a little mechanical aptitude—and it is a poor physician who does not possess this.

How to Bind Your Magazines

Divide the volume in two parts. Beginning with the first copy, be sure that the binding edges are even. Then take four steel-wire finish nails about three or four inches long and drive them perfectly straight at regular intervals through the first copies. Where they come through, mark that as the beginning place for four other nails on the remainder of the copies. Now remove the nails and insert a copper or malleable-iron wire through the two upper, and another piece through the two lower holes, bending them down with a hammer. This makes a solid, substantial volume whose leaves will never come out.

Now for the esthetics. With glue cover the back with cambric cloth (I use black), put on a sticker (after the glue has dried),

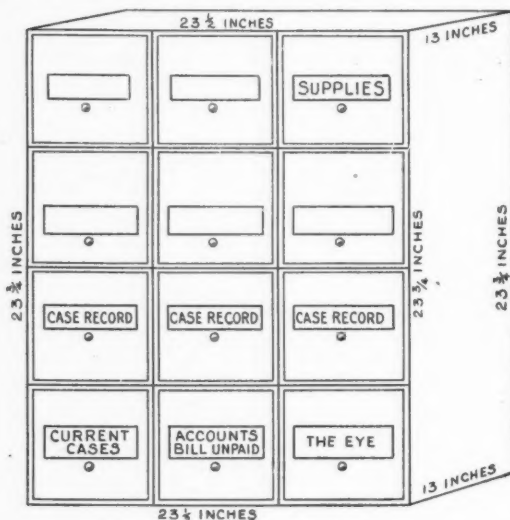


Fig. 4. Filing case

time give you a working knowledge and an up-to-date easy-reference library.

Then, too, many journals ought to be saved entire, and articles referred to from this index. Some publishers are putting out ready-bound volumes of their publication at a slight extra cost. I do not consider this a good idea as it is apt to make the physician careless and wait until the bound volumes come out to get his up-to-date medical information. I rather advocate the idea that every physician should know how to bind his own magazines. It is easy to do and the cost is nothing; and then he has an excellent opportunity to review.

As one reads, it is a good plan to use a colored pencil, marking the articles that claim your attention and note the same on the cover. When the end of the year brings the last copy with its valuable index, my plan has been this. First remove the staples and glue. Take the outside pages with all the advertisements with the index to form the outside cover, or front, of the book. Remove all the intervening advertisements

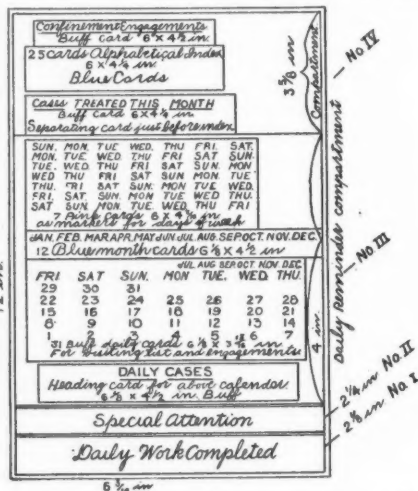


Fig. 5. Drawer containing "current cases"

label the volume, and some time at your leisure take it to a printer and have the edges trimmed. The leaves will then turn smoothly like any book, and you will be surprised that you have done it so easily. The whole thing requires less than an hour's actual labor, and is a good thing for recreation. The advantages of this method are that it gives you a handy volume ready for immediate use. To the rural physician this plan (evolved in my former country practice) is invaluable. His journals are kept in methodical order and not lying around, and do not come into the hands of the lay population. This also makes quite a saving, while most of the work can be done by the members of the doctor's family.

The books so bound stand up well on the library shelves and are valuable for reference. Any magazines or bundle of papers can be bound in the same manner. Then, with the aid of an Index Rerum as above described the doctor's knowledge is well systematized.

Keep an Accurate Record of Cases

The physician is essentially a public man. People watch his methods and are thereby impressed. By his methods and systems he is advertised. People go to the one who appears to be decidedly interested in their case. This interest is manifested by being able to remember little details and symptoms (very important to the patient) and asking about them at the next interview. This is best done by keeping an accurate record, from visit to visit, of symptoms, conditions and treatment. You will soon have the reputation of knowing all about and carefully watching your patients, and they will be glad to compare their condition, such as weight, and so on, from time to time. Further, if you have a debit and credit space after each interview they will take more pains to see that their account is balanced from time to time. Many a time you can make a cash patient by remarking something about the charge, or debit, column.

Many physicians will say, "Oh, that is too much work."

It is not. The old-fashioned methods are the hardest kind of all, and they are not

original entries. At present our ledger is a copy from our day book, which is a copy from the visiting list, and this list is changed and perhaps copied from week to week. We are looking for a system that will do away with all this copying.

In the plan that I present all you have to do is to take down notes while you are examining your patient, putting aside foolish cajolery. Then when you leave, you will be surprised to find that you have spent not more than fifteen or thirty minutes in the interview; that you have the exact time of your examination; that you know all about the elimination, the temperature, pulse, respiration, the leading symptoms and the treatment for the same; whether the patient was seen at the house or your office; your charge for services; and whether he paid cash or not.

Here, then, you have a fund of information that is reliable, because it is taken on the spot, an original "entry", one that is good in any court of justice, indisputable because the time of your visit is there and the patient and his family saw you put it down. And then, too, your bookkeeping is all done. There is no posting of books after you reach your office, hence much time is saved. Does it take much time? Decidedly, no. To prove it: not long ago I attended four patients in fifteen minutes in this manner, noting the time of the reading of the temperature as the time of my examination.

Now, what system will accomplish all this, and at the same time be compact and easy to carry around? This is hard to answer off-hand. I have been working on the matter for some years. On the corner of my desk, in Figure 1, is shown a bunch of some thirty discarded systems. In many of them you have to write out a sheet for every call or attention, and these are apt to be easily lost. Many are too bulky, a lot are on cards. The fact that these systems are so numerous shows that there is a demand on the part of physicians for some labor-saving devices so as to preserve easily bedside clinics.

This is a matter that is not touched upon in our medical schools, and yet it would be a great help to the young physician who,

when taught something about systems and the preservation of clinical records, can use a system adapted to his needs. There has been a long-felt want for a suitable system, and the mercantile world is making an effort to fill the same at prices ranging from \$25.00 to \$500 or more. I have carefully examined every one that I could get hold of and herewith give the results.

My Own Improved System

To the young physician one of the first considerations is expense. Outside of my time used in getting it together (also minus the seal-press), the entire outfit shown in Figure 1 cost me less than \$15. The desk itself is not included. It is a relic of my undergraduate days. The outfit consists of a case of twelve drawers placed on a shelf over the desk. (See Fig. 4.)

This case was made to order. It has a fine finish, and its actual cost at my door was \$6.65. The sixty-five cents was for freight and express. The inside measurement of each drawer is $12 \times 6 \times 1-8 \times 4$ 1-2 inches, and is divided by a movable partition.

In Figure 1, on the middle of the desk, is shown the drawer containing "current cases," or "cases under treatment." The sides have been cut down to make it easier to handle. This drawer is divided into four compartments, perhaps best explained by diagram. (See Fig. 5.)

The markers for the days of the week are stored right behind the month-cards. With rubber type and indelible ink anyone can make one of these calendar sets. Where the printing comes the cards are reinforced by cloth, glued on. I used Dennison's gummed cloth tape for this purpose, and it makes it very neat and durable. This gives you a perpetual calendar. Those that have seen mine think that it was done by a regular printer. I was glad that I was able to make it when I found that there was nothing published like it to suit my needs, and to have it made to order I found that it would entail heavy expense.

I place my "engagements" in front of the card bearing the date, so every case in front of that date must receive immediate

attention. When the work is done it is placed in No. 1 compartment, awaiting a general summary at the end of the day.

At the end of the month the bills for the month just finished are made out from the records in the alphabetical index behind the card inscribed "Cases Treated This Month." Or these bills may be made out at any time, placed in the alphabetical index of the "Accounts" drawer, and then sent out as desired. The "confinement-cases" are examined and placed under the date they need to be attended to. By this plan there is no tax on the memory.

How Accounts Are Handled

After the bills are made out and mailed these records are transferred to "Accounts, Bills Unpaid." (See Fig. 6.) In this

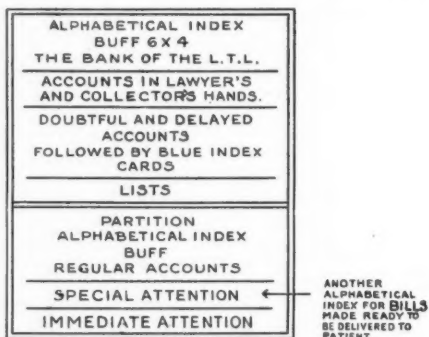


Fig. 6. Arrangement of "Accounts" drawer

drawer there are four alphabetical indexes separated by a partition. First comes a card $6 \times 1-8 \times 4$ inches, labeled "Immediate Attention." Next is a card for those accounts requiring "Special Attention," size $6 \times 1-8 \times 4$ 1-4 inches. Next is an alphabetical index for "Bills," that I make out usually when the "goods are delivered" and mail about the first of the month or whenever the patient calls for them. This is a convenience, for the work is done at leisure moments and the wife can receipt the bill at any time in one's absence. This card is followed by "Regular Accounts," in alphabetical order. Behind the partition in the next compartment comes a "List of Accounts Sent," followed by "Doubtful and Delayed

Accounts," also alphabetically arranged. Next are "Accounts in Lawyer's Hands." Finally comes the "Bank of the L. T. L.," where hopeless accounts are located by an index. When any account is settled in full, it becomes history and is placed in its proper place in the "Case-Record."

There being twelve drawers in the case, there is no chance for crowding.

Now, as to what kind of material we shall put our records on, cards are out of the question, they being too bulky. A strong linen paper, I find, is the best, measuring 7 1-4 X 5 1-2 inches, folded once. This will give room enough for at least eighteen attentions. A blank sheet may be used, but

a printed form is neater and more business-like. I have been able to find but one firm that has anything simple, concise, without bulk, not requiring many sheets, and they were in the field for business earnestly enough to sell the supplies (just as wanted) without requiring one to buy the whole outfit, at a cost of \$25.00, which consists of a case of four drawers and supplies. If one wants an outfit all made up this is the best one to buy, and this particular outfit is meeting with especial favor. The advertisements of the concern now appear in many of the leading medical journals. They have history-sheets for nearly every possible line of work.

(To be Continued)

Lactic-Acid Ferments

With Special Reference to Their Application in Genitourinary Work

By **FREDERIC S. MASON, B. Sc., Ph. G., M. D., New York City**

IN a rather long article published by me in the London *Lancet*, the 26th of September, 1908, I reviewed the question of the various bacteria which give rise to lactic acid as residue of their metabolic activities, but as we require practical information applicable to our special work rather than a technical expose of the subject, I purpose to review briefly only the work of Metchnikoff and other bacteriologists. In passing, allow me to add that while Metchnikoff, who has the modern but somewhat unprofessional faculty of getting into the "limelight," has brought this question of lactic ferments into prominence more especially in connection with his book on the "Nature of Man" and the "Prolongation of Life." This eminent authority is only one of many others who have studied the lactic ferments.

The Lactic-Acid Ferments of the East

Bacteriological examination of these various ferments used by eastern races in Europe and Asia Minor, the secret of whose preparation has been handed down in families from time immemorial, showed that far from being

pure ferments, they are contaminated by a great variety of bacteria, quite a number of which were saprophytes and even pathogens. The crude methods employed in the preparation of these milk ferments rendered this inevitable, but sufficient of the strong lactic-acid-forming microorganisms are present in these primitive ferments to counteract the obnoxious microorganisms. It is evident, however, that from a therapeutic standpoint it is desirable to make use of pure cultures rather than to use lactic ferments mixed with undesirable bacteria. With great pains such pure cultures of the most active acid-producing bacteria have been isolated.

The autointoxication resulting from undesirable ferments within the intestine is now believed to have a direct bearing on precocious senility, since the toxins resulting from undesirable intestinal fermentation so irritate the kidney and blood-vessels that function is impaired by producing fibrosis infiltration which leads to premature old age.

Most civilized races have abandoned the extensive use of fermented milk foods on an extensive scale; however, since the fore-

going facts have been brought out the cry of "back to nature" is being seriously considered and scientific principles are utilized in furnishing the useful lactic ferments which have been recognized as the most useful in combating the growing tendency to degeneration of modern man. Especial praise should be given, in connection with the study of lactic ferments, to Professor Masé of the Paris Pasteur Institute, who, while very modest and retiring, has been, perhaps, the most persistent worker in this direction.

A few words as to the theory on which intestinal autointoxication is prevented will here be in order, since it will throw a light on the real value of these ferments as applied to genitourinary work.

Theory of Intestinal Autointoxication

Most saprophytic, pathogenic and many useful bacteria, and even some protozoa flourish best in alkaline culture-media, nevertheless quite a large number (two to three hundred varieties) give rise to what I should call "excremental" lactic acid, so that the mere fact that certain bacteria give rise to it, under favorable conditions of temperature and in a suitable culture-medium of saccharine matter or even albumins (by splitting off the carbohydrate group of the complex proteid molecules), is of no great value.

The real value of lactic ferments lies in the fact that some bacteria, and especially those used in oriental countries for making sour-milk foods, have acquired the faculty of proliferating in the presence of comparatively large amounts of lactic acid, while those that are less acid-resisting cease to live. Examples of pathogenic organisms which resist only small amounts of lactic acid are bacillus coli, bacillus aerogenes capsulatus, enterococcus of Thiercelin, staphylococcus aureus, streptococcus pyogenes aureus, oidium lacticum, bacillus typhosus, the spirillum of Asiatic cholera, and the gonococcus, which latter is one of the most interesting to us.

Most of these bacteria are arrested in their proliferation very quickly by the lactic acid formed, just as yeast fermentation is arrested

when "excremental" alcohol reaches a certain percentage. It is just this point which makes it necessary to use those pure cultures which are strongly acid- and heat-resisting. The bacillus subtilis, for example, which is a casein solvent, begins first to give off a certain amount of lactic acid, followed by alkaline fermentation. The colon bacillus (against which lactic ferments are especially used internally) produces a little lactic acid, but soon becomes inactive as the fractional percentage of acid increases.

Restraining Action of Lactic-Acid Ferments

I have frequently demonstrated the restraining action of strong active ferments on intestinal autointoxication from the colon bacilli and saprophytic bacteria. When strong cultures are used, the general well-being of patients is greatly improved and the urine shows that the ethereal sulphates and indican are reduced very considerably. As a patient remarked only last week, "I have never since I can remember felt as well as I do since I began the use of buttermilk made with these lactic ferments."

This man, aged thirty-two, a lawyer, was a neurasthenic of a pronounced type, his urine was blue-black with indican, flatulency was very pronounced, his appearance was cadaverous, and his urine showed 0.4 percent of sugar. All these symptoms cleared up with the exception of the sugar, which was reduced to 0.2 percent within a week, yet the man had previously tried ordinary buttermilk treatment and had been under medical treatment on and off for years.

This brings me to the question of for what lactic ferments should be used. These units of cell-life which give rise to lactic acid are of numerous varieties, but they are variable in their acid- and heat-resisting properties, as I have already shown, and while buttermilk has been used as a food by all nations from time immemorial, these fermented milks such as kumiss, kefir milk products, yoghurt, as well as our clabber, are the product of mixed ferments and contain very undesirable microorganisms beside the useful ones. Mere exposure of milk to

the air will sour it, because the air contains innumerable bacteria, and the dairy-made milk is soured chiefly by the bacteria from the cow's dirt on the udders and their excreta.

Thanks, however, to a preponderance of the common *bacillus lactis* sufficient lactic acid is usually formed to arrest proliferation of saprophytes and pathogenic organisms beyond a certain point, so that even the worst buttermilk is better than ordinary unfermented milk.

Defects of Ordinary Ferments

Another reason why ordinary ferments are of not much value is that they cannot resist much heat. This is the case with the *bacillus lactis*, which is always present in fresh milk. Another useful ferment, the *bacillus acidi paralactici*, has therefore little antiputrefactive utility, since it becomes inactive at a temperature of about 36° C. Many cheeses have present in them quite dangerous toxin-forming ferments, but these bacteria do not resist body-temperature and hence become harmless when ingested.

A number of useful lactic ferments have been isolated and are sold commercially in the form of tablets made by desiccating in an autoclave rich milk-cultures with an excess of saccharine and proteid matter which allows the preservation of the latent activities of the ferments. Unfortunately, the manufacturers usually decorate their products with fancy trade-names without stating what the actual ferments employed are or by what methods they may be distinguished. A great number of these commercial products are now on the market, either in the form of tablets (compressed) or as bouillon-cultures. The latter, however, keep badly and must be prepared freshly.

The Commercial Products

I have brought with me specimens of some of these commercial ferments and have made milk-cultures from them for your examination. These are known under the trade-names of lactone, lactic bacilliary tablets (Fairchild), lactab, lacteol, lactoids,

lacto-bacilline, fermentlactyl, etc. Of these, fermentlactyl literature appears to give the most precise details as to the actual microorganisms which the manufacturers use and which they claim are pure cultures of the *bacillus bulgaricus* (*streptobacillus lebenis*) and of the *streptococcus lebenis*. I obtained the microphotographs of these strong lactic ferments from Professor Masé of the Paris Pasteur Institute, of which specimens shown are copies. The presence of both these lactic ferments appears to be essential (for internal use at least) in order to prevent a disagreeable taste which cultures made with the strong *streptococcus lebenis* or *streptobacillus lebenis* alone possess.

Rosenthal and Chazarain have recently taken great pains to obtain scientific grounds for the lactic-ferment treatment of gastrointestinal diseases. They cultivated, under the most severe conditions, various pathogenic microorganisms with lactic ferments, but anyone interested I would refer for details to a translation of this communication which I made for *Pediatrics*. Their findings give proof of the value of lactic ferments in killing the enterococcus of Thiercelin and other pathogens. These authorities found that it was impossible to cultivate these pathogenic bacteria in the presence of cultures of the *bacillus bulgaricus* (*streptobacillus lebenis*), and state that, when these were cultivated together, in four days at the utmost the lactic ferments alone were found to be actively proliferating.

I will not weary you with quotations from the clinical reports by physicians who have studied the lactic ferments, suffice it to mention the authors of some recent communications. Charles North reported 300 cases treated with lactic-acid bacteria (*N. Y. Med. Jour.*, 1909), Professor Bouchard ("Therapeutique des Maladies Infectieuses"), George Hershell (*Lancet*, Aug., 1908), Charles Hunter Dunn of Boston ("Proceedings of the American Medical Association," 1909), John Huber (*Medical Times*, May, 1909), F. Forchheimer (*Cleveland Medical Journal*, June, 1909), R. Llewellyn Jones (*The Hospital*, Oct., 1909), Hall and Smith (*British Medical Journal*, March 20, 1909), W. Pratt

(AMERICAN JOURNAL OF CLINICAL MEDICINE, Dec., 1908), George M. McKee (*N. Y. Jour. of Med.*, Sept., 1909).

In the *Journal of the American Medical Association*, January, 1909, P. G. Heinemann condemns all brands of commercial ferments. This experimenter, however, is not a physician, and can hardly be accepted as an authority, for his methods of examination will hardly stand the test of expert bacteriologists, inasmuch as he compared his findings with milk soured with bacillus lactis from the air, which from a therapeutic standpoint of intestinal asepsis is of very doubtful value as compared with pure cultures of selected bacilli from Bulgarian sour milk.

From what I have said, therefore, I think you will hardly contest the theoretical or practical value of lactic ferments administered internally.

Treatment of Local Infections

I will now endeavor to show what has been done with these ferments for the treatment of local infections within the external orifices of the body.

W. Walsh of Philadelphia (*Internat. Jour. of Surg.*, Nov., 1908) drew attention to the application of lactic ferments and the favorable results following the treatment of pathogenic secretions of the postnasal cavities and the ear with suspensions of these bacteria sprayed into these cavities.

Otto Glogau (*American Medicine*, May, 1909) reported an interesting case of chronic suppurating pansinusitis which yielded to the treatment, and Holbrook Curtis (*Academy of Medicine*, Oct. 28, 1908) mentions a number of such cases and claims a very large field of usefulness for lactic ferments in sinus disease, atrophic rhinitis, empyema of the frontal sinuses, etc. Both these authorities used suspensions in bouillon-cultures. Personally, I have objections to bouillon-cultures because they require to be fresh, and in suppurating discharges from the ears I have used with remarkable success, in two cases, a dry powder containing the lactic ferments in a latent but potential state. A similar powder has been recom-

mended by W. B. McLaughlin (*Medical Record*, Dec. 11, 1909), and I shall refer later to this dry dressing which I think will be very suitable for genitourinary work.

Dentists have used bouillon-cultures of lactic ferments in pyorrhea alveolaris by injecting it under the floor of the mouth into the cul-de-sacs and interdental spaces, and Pierre Rosenthal and A. Bertholot (*Rev. Pharmacol. Med.*, Aug., 1910) recommend the dry powder made from the tablets to clean the mouth frequently, and found results most encouraging. Dr. O'Brian of this city is now doing some experimental work on similar lines and has promised me to report progress.

In the treatment of pyorrhea alveolaris, however, I do not look for much direct benefit, because the activity of the bacteria must of necessity be rapidly diminished by the alkaline buccal secretions and swallowing, which will hardly be likely to allow the ferments time to proliferate unless injected in a liquid form deeply into the sacs.

Effects of Massol Germ in Diphtheria

At the Société de Biologie (Feb. 26, 1910) Rosenthal presented the results of his experiments with mixed cultures of the Klebs-Loeffler bacillus and the Bulgarian lactic ferments. This authority found that a culture of the Bulgarian lactic ferment could not be contaminated with the bacillus of diphtheria and that when cultivated together the lactic ferment brought about the death of the Klebs-Loeffler bacillus within a few days.

These experiments suggest the use of whey of buttermilk made from pure cultures of the most active lactic-acid-forming Bulgarian ferments (the streptococcus and streptobacillus lebenis) found in the commercial ferment known as ferment lactyl, in the treatment of diphtheria, since such a culture might be applied to advantage as a spray or gargle to supplement the antitoxin treatment of diphtheria.

Medical literature has, from time to time, referred to the use of lactic ferments in the treatment of inflammatory processes occurring within the male and female geni-

talia, but I have never seen any really definite statements, and think that at our clinic we have excellent opportunities of determining this question, and with the sanction of our respected chief, Dr. Pedersen, I hope such an investigation will be carried out systematically. I have thought out various methods for the application of these ferments and hope that in the discussion of my paper suggestions will be forthcoming from other members of the staff of the Hudson street House of Relief.

DeSantos Saxe tells me he has tried them, using cultures in bouillon, but without good results. I doubt, however, the activity of his cultures.

Uses of Lactic-Acid Germs in Gynecology

In the female we have, of course, much better opportunities for their exhibition than in the urethra of the male, and I should be glad to furnish material for experiment to any of our members doing such work.

D. Watson (*Brit. Med. Jour.*, Jan. 22, 1910) has used milk-cultures of lactic ferments in males and females and reports excellent results. In females, he first thoroughly disinfected the parts and curetted them when necessary, and after removing the disinfectant, the ferment was introduced into the vagina. The first effect of the treatment was usually an increase of the discharge, but the purulent quality of the secretion soon disappeared, and it became white and thin. This he removed by gentle swabbing. In the most favorable cases the secretion became normal in a few days; other obstinate cases took two or three weeks. He remarked that his cases appeared to benefit even when the tubes were involved, and in the great majority of cases they yielded to this treatment, where douching and vaginal swabbing had been tried, and where the internal os was patent, curetting and cauterizing had failed. This author reports only two cases of discharge from the male urethra, but these were followed by remarkably good results. We have therefore but little data to go upon.

It may be suggested that we might as well apply lactic acid directly to the parts in-

stead of producing it *in situ* by the lactic ferments, but a moment's reflection will show us this is undesirable for various reasons and would perhaps be irritating.

The object sought is the destruction of the pathogenic organism causing the local inflammatory discharge, and since these burrow down into the tissues, superficial application of lactic acid to the vagina or male urethra would be ineffective. What we want is the slow proliferation and penetration into the tissues of lactic-acid bacteria feeding on the mucopurulent discharges which form a barrier to the progress and final extinction of the inflammatory germs by making the local area a bad culture-medium for any other than the strong and resisting lactic ferments.

Use Milk Cultures

I do not like the bouillon-culture idea and would suggest, for urethral injection, strong milk-cultures of the Bulgarian ferments, reinforced, if necessary, by the addition of lactose. The coagulated casein may be strained out through gauze. These injections should be renewed after urination. Such strong cultures will have to be fresh, but they will keep four or five days in a cool place.

In the female we practically restore, by these means, the normal protecting vaginal secretion which prevents infection by gonococci and other microbes when the tissues are healthy. The vaginal secretions being normally acid from lactic and sarcolactic acids, it is only when some abnormal local condition brings about venous congestion that invasion of the os and finally the uterus and tubes takes place. This is why the healthy woman should never be douched with antiseptic fluids which destroy the bacteria and which have their natural habitat within the vagina-walls. These bacteria are allied to lactic ferments and when let alone take part in the natural cleansing and disinfecting toilet of the healthy vagina.

How to Make Milk Cultures

The making of a milk-culture (buttermilk) is very easy, and while it requires too much

technical detail to make absolutely pure cultures, this is not essential. Such cultures contain sufficient of the strong lactic ferments (streptococcus and streptobacillus lebenis), if the proper lactic-ferment tablets are employed, to overcome and destroy any staphylococcus pyogenes or other pathogenic bacteria in the milk. All that is required, therefore, is fresh milk (which already contains the useful bacillus lactis ready to act as a starter).

Crush a tablet of the lactic ferment, place it in the bottle of milk and in a warm place (not below 35° or above 55° C.), and in from eight to ten hours a fine culture will be obtained, which may be increased in saccharine culture-strength, if desired, by the addition of 2 percent of lactose. This provides for keeping up of the proliferation of the ferments for several days and will give rise to from 1 to 1.5 percent of lactic acid in the culture.

In the treatment of women, however, I do not propose to use the liquid cultures, but rather the dry ferments referred to above. This powder can be made by crushing the strong commercial tablets of lactic ferments and triturating with 50 percent of sugar of milk. I would suggest that, in vaginal and uterine discharges, the parts be thoroughly cleansed, washing the vagina with a two-percent solution of sodium biborate, followed by distilled water, and finally swabbing out

with a tampon saturated with hydrogen-peroxide solution, and then carefully drying. The dry powder of lactic ferments can then be dusted in, covering the os, the vagina being lightly packed with dry absorbent cotton. Such a dressing would not be uncomfortable to the patient, and one or two such dressings daily would, I feel sure, give good results in leucorrhea, and even in acute gonorrheal infection.

If the cervix, the uterus and tubes also are infected, the lactic ferments would finally reach all parts, for they will proliferate in the secretions, and since the streptococcus and streptobacillus lebenis are optionally aerobic and anaerobic, the absence of air in the uterus (owing to the amount of secretion) would not inhibit their growth. It is worth a trial and I trust someone will follow it out.

This dry dressing would, I am inclined to believe, be equally effective in the treatment of buboes (in place of iodoform, when opened for drainage), and as a dusting powder on chancroids after curetting.

Many other suggestions will occur to every one, such as the treatment of mixed chancroid and syphilitic sores. In all these cases we always have, in fact, a mixed infection, and as I have shown, these lactic ferments have a specific action on the pus-forming organisms, and there is every reason to hope for effective results.

::: THERAPEUTIC NOTES :::

ATROPINE IN PARALYTIC ILEUS

A. Lederer (cited in *Ther. Monatsh.*, June, 1910) has administered atropine with very good results in many cases of paralytic ileus, the mode of employment generally being to administer a subcutaneous test-dose of 0.001 Gram, and soon after a larger dose, from three to five times that amount, was injected. In not a single case was it longer than ten minutes before results were ob-

tained. In two cases symptoms of intoxication occurred, which, however, were only transitory. The treatment was supplemented by colonic flushings, but these were effective only after the injections of atropine.

CALCIUM CHLORIDE IN RHINORRHEA

It will be conceded says Lake (*British Medical Journal*, July 9, 1910), even by the most experienced rhinologists that the treat-

ment of that exceedingly annoying and distressing symptom, rhinorrhea, is unsatisfactory, even to put it mildly.

It is considered, and had been considered for a long time, that rhinorrhea is a symptom of a vasomotor rhinitis. All the remedies recommended for its relief had their basis in the idea that this symptom was an evidence of a neurosis. Lake had felt for a long time quite helpless in the matter of treatment. There appeared only one source for the trouble, and that was the blood. Consequently, some two years ago he first tried the effect of calcium chloride, giving 30 to 45 grains a day for two weeks. With scarcely an exception this objectionable symptom was completely removed; sometimes it recurred at long intervals, always to yield again; and, so far, no case of rhinorrhea has proved absolutely unresponsive, though one was very intractable.

The real pathology of the condition he has not attempted to elucidate, but the amount of chloride in the blood may yield a hint as to the causative factor, probably merely excessive osmosis.

He has not employed the salt so far in spasmodic sneezing, hay-fever or asthma, but it might possibly be of use here also.

ATROPINE METHYLBROMATE IN DIABETES

Julius Budisch (rev. *Wien Med. Woch.* 1910; No. 28, col. 1670) recommends atropine methylbromate in diabetes. Even if long continued, relatively large doses (0.008 Gm. three times daily, increasing to 0.03 Gm. three times daily) are borne without symptoms of intoxication. The elimination of sugar is influenced by atropine far more decidedly than by any other remedy.

ADMINISTRATION OF STROPHANTHIN

It has been urged that strophanthin be administered intravenously, but *The Therapeutic Gazette* concluded that this should be reserved for grave emergencies, and that while the technic is simple there are disadvantages and dangers attending, rendering

the intramuscular injection preferable unless haste is essential. Heffter found the strophanthins in the market quite variable, Merck's being one and one-half times stronger than Boehringer's or Schuchardt's. Boehringer's consisted of a mixture of two glucosides of differing reaction and was condemned.

EFFECT OF COLCHICINE UPON THE METABOLISM

Maurel and Arnaud have made exact measurements of alimentary ingesta and urinary excreta in rabbits for the purpose of determining the effects of colchicine. According to *La Province Médicale*, 1910, No. 8, they gave the alkaloid subcutaneously in doses of 0.0001 Gm. and 0.0015 Gm. per kilogram-weight, and found that it (1) diminishes the amount of the assimilated nitrogen and increases the amount of nitrogen excreted by the kidneys; (2) increases the amount of phosphoric acid in the urine in about the same degree.

These results go far to justify the use of preparations of colchicine in affection due to overnutrition, such as gout.

CALCIUM SULPHIDE FOR ERYSIPELAS IN INFANTS

Dr. E. Toussaint, in *La Dosimetrie* for May, 1910, discusses the great difficulty in treating erysipelas in newborn infants. As noted a teacher as Trousseau says that not many years ago the disease invariably proved fatal in infants, but that this has been changed by the adoption of dosimetric remedies, and more especially since treating it with calcium sulphide. Dr. Toussaint reports the cases of two infants, both less than one month old, whose mothers, at their birth, had severe puerperal sepsis. The babies were ill with the same infection, and the question of treatment arose.

Attempting to administer calcium sulphide by mouth, the doctor found that one baby would not take the solution at all, while in the other very soon vomiting occurred. It was impossible, of course, to

give the sulphide granules undissolved; and so it occurred to the doctor to let the granules dissolve, with the exclusion of the atmosphere, in a small glass syringe of five centimeters' capacity filled with warm water; one granule being dissolved in each syringe filled with water. After dissolving, it was injected into the rectum, which had previously been cleansed by an enema of plain water [and 0.5 percent of salt]. The treatment proved so effective that each baby received four granules in every twenty-four hours.

Baby No. 1 was treated for ten days, the other for sixteen. The results were perfect in one of the infants, who recovered and was entirely restored to health. The second baby, which was raised on the bottle, later on was affected with an eczematous eruption on the face, which also was treated with calcium sulphide. The baby, nevertheless, did not thrive very well, and now, at the age of nine months, is weakly. Dr. Toussaint recommends this mode of giving calcium sulphide to very small infants, as of value.

THE TREATMENT OF HEMORRHOIDS

According to Dr. E. Monin (*La Dosimétrie* for May, 1910), people affected with hemorrhoids should lead an active life with moderate exercise in the open air. If they are troubled with constipation, violent purgation, especially with aloes, is contraindicated. One or two granules, each, of podophyllin and atropine taken at bedtime will produce free movements, while a coffee-spoonful of seidlitz powder (effervescent magnesium sulphate), taken in the morning with a glass of hot water, will stimulate an efficient alvine excretion. Abdominal massage and exercise are useful to prevent hemorrhoidal accidents. The exercise is done by the patient lying flat on the carpet and attempting to rise without using the arms to support himself. If there is any rectal congestion, baths with lukewarm water, compresses over the liver with solution of salicylates, and lotions to the anus of warm ichthyol solution, are useful.

Of especial importance is an exclusively vegetable diet. On the whole, alcohol, wine,

bouillon, coffee, tea are contraindicated, while such foodstuffs should be chosen as are capable of stimulating peristalsis and of favoring the removal of the alvine discharges. Among these articles may be mentioned beets, dishes prepared with milk, stale bread, vegetables rich in residual material, such as spinach, cooked carrots, potatoes; also fruits, either raw or cooked, which leave in their passage through the intestines a large amount of waste material, as, for instance, strawberries, raspberries, pears, raisins, dates, figs, plums, pumpkin. Horseback riding and sexual excesses, which excite the rectal mucous membrane, are to be avoided.

Against hemorrhoidal crises it is well to administer, three times daily, one grain of calcium sulphide, together with one granule of ergotin and one of hyoscyamine, in order to establish the vascular contractility. This treatment, in the author's opinion, is superior to that with hamamelis, hydrastis, capsicum, horse-chestnut, and such like. In the presence of a well-defined hepatic plethora one should prescribe, once every three hours, two granules of calomel and two of lithium salicylate; at bedtime some biliary salts. To this may be added about half an ounce of olive oil, with 20 drops of essence of juniper, every morning before lunch.

In this manner the abdominal circulation is best stimulated. The portal system becomes less congested and the hemorrhoidal veins are less obstructed. Hepatic obstruction is just as harmful to persons afflicted with hemorrhoids as are garters to people troubled with varicose veins on the legs.

There are cases, however, in which the periodical loss of blood from hemorrhoids is useful. This is especially the case in plethoric persons; and in such individuals we must be careful not to suppress a providential discharge of blood which in itself is equivalent to a prophylactic venesection. Such a loss of blood acts as a safety-valve for people afflicted with gout, Bright's disease, heart disease, and sclerosis. Every observing physician must admit, in certain cases, such an ability of the organism to

defend itself and to restore its own equilibrium, which the ancients called, very properly, the *medicatrix naturæ*.

After each defecation the anus should be washed with lukewarm water to which a little alum has been added. If the hemorrhoids are turgid, the lotion should be used very hot, and should be repeated often, when they will remedy the congestion of the rectum. If the condition has been of long standing, cold irrigations, lasting three minutes, may be preferable, repeated evening and morning. A soothing ointment containing opium, belladonna, cocaine, adrenalin, and such like, or else suppositories with tannin and hamamelis, may be required, and these will promptly quiet the pain.

HOW TO GROW TALL

It is said that no man "by taking thought can add one cubit unto his stature." Apparently, however, there are other ways of accomplishing this desired result. Marion Harland, answering an inquirer in the *Chicago Daily News*, tells how stature may be added to, as follows:

"When you rise in the morning, and after the bath, rise upon your toes and stretch the tips of the fingers up toward the ceiling as far as they will go; sweep your hands over front, touching tips of fingers and the flat of the palms to the floor, keeping the knees straight. Repeat these exercises three or four times daily, keeping them up for ten minutes at a time, standing on tiptoe with arms up at full length as long as you can bear the strain. Persevere and you will surely gain in stature. I know of a youth of 22 who grew two inches a year by doing this."

CONCERNING DRUG-NIHILISM

The editorial announcement of *The Journal of Pharmacology, and Experimental Therapeutics*, Vol. I, June, 1909, No. 1, cites Prof. Paul Ehrlich, the eminent investigator in the field of specific and experimental therapeutics, as having recently said: "There can be no doubt that the three

great fields of knowledge, pharmacology, toxicology and therapeutics, in their theoretical and practical aspects, form the most important branches of medicine."

ON DIET IN RENAL DISEASES

Linossier and Lemoine reported to the Academy of Medicine in Paris (*Muenchen. Med. Woch.*, 1910, No. 18, p. 987) on their experiments concerning the influence of albuminous substances of animal origin upon the kidneys. All these substances, subcutaneously injected, produced albuminoid and renal diseases. If they appear harmless in the usual manner of ingestion, it is the gastric juice which removes their toxicity. But if the digestive functions are insufficiently carried on or if the kidneys are pathologically altered the harmful influence of albumin becomes evident. For this reason persons with kidney disease should eat animal proteids only when cooked, never raw. Beef owes its bad reputation in this respect to the fact that it is often eaten when only half-done. In reality veal is more toxic, but has the advantage of being invariably fully cooked. Egg-albumen should always be coagulated.

If the digestion is poor, even uncooked milk may be harmful for the kidneys, and patients with albuminuria, when put on a milk diet, should drink the milk only after it is boiled, if their gastric function is insufficient.

INFANT FEEDING WITH UNDILUTED CITRATED MILK

Eighty consecutive cases of wasting infants fed on undiluted citrated milk are reported by Dr. Frederick Langmead (Proceedings Royal Medical Society of Medicine, May, 1910, through *Journal American Medical Association*, July 9, 1910, page 150).

The method of adding sodium citrate to cows' milk was first advocated by Sir Almoth Wright, being based on the influence which calcium salts have been proved to exert on the coagulability *in vitro*, the soft-

ness and fineness of the curd varying directly with the amount of the sodium citrate used.

Dr. Langmead employed the process without diluting the milk, which had been found to have disadvantages. He used it in such cases in which artificial feeding was unavoidable. He found it important to start well below the theoretically adequate amount given in the table of Holt as to quantity and intervals of feeding and he had to feel his way from week to week. Having decided on the amount and frequency of the feedings, to each ounce of milk ordered two grains of sodium citrate was added in the form of a watery solution of such strength that one dram was added to each feeding. The mother was then instructed to bring the milk to a boil and then add the solution. This served to sterilize the milk, and it has been found that the clot of citrated milk thus brought to the boil is finer than that which has been pasteurized or merely warmed. In babies, after two weeks old, the method was found of value. The citrating was gradually lessened at the age of about five months and can be usually omitted at about six months.

One of the chief advantages of the method is its simplicity, much manipulation with its attendant risks and mistakes being avoided. It applies most forcibly to the hospital class of patients, for whom it is also suitable on account of its cheapness. The disadvantages of dilution, the bulkiness of the food, the complexity of the monthly variations, the dangers of artificially preserved or thickened cream, or of giving food containing too little fat, are all evaded. There is no danger of scurvy. Langmead has been struck by the firmness of the muscles of babies fed by this method, as contrasted with others, and asserts that this is a better guide to the state of the nutrition than is the weight.

IODOFORM AS AN INTERNAL MEDICAMENT

Moleschott employed iodoform in organic affections of the heart, especially in the

asystolic period of mitral insufficiency. He thus secured the compensatory reinforcement of the cardiac muscle and frequently the disappearance of the circulatory troubles.

In such cases Burggraave associated iodoform, strychnine and digitalin.

In cardiac vertigo iodoform combined with caffeine renders great services.

With diabetics taking 0.10 to 0.40 Grams of iodoform daily, Moleschott secured a favorable action and a diminution of the sugar.

In many cases of various respiratory affections—nervous asthma, whooping-cough, etc.—iodoform in doses of 0.2 to 1.0 Gram by inhalation, in three daily sances, gave these results:

1. Diminution of the paroxysms of cough.
2. Lessening expectoration to one-fifth or less.
3. Râles less extensive, respiratory murmur less rude and more energetic.
4. The patients after the inhalation are more tranquil, less agitated, and are seized with a sweet slumber.
5. The temperature falls and often becomes normal.
6. The urea varies with the febrile movement, without always being directly influenced by iodoform.
7. The body-weight is augmented.
8. The local sweats diminish and many times disappear.
9. In asthma and whooping-cough the accesses of dyspnea and of cough become less frequent.
10. Taken thus by inhalation iodoform acts more quickly than by the stomach, and does not trouble the digestion. This does not apply to the granules, which do not disagree or lose strength.

INTESTINAL OBSTRUCTION AND CARCINOMA

An intestinal obstruction developing rather suddenly after an indefinite history of constipation in persons past middle life is usually due to carcinoma of the sigmoid.—*Medical Review of Reviews*, April, 1910.



The Need of Studying Senility

IV

In our last chapter we closed with the proposition that senility is not a disease but a natural stage in the evolution of the living being. To develop this idea with some clearness, we must go back a few steps.

In order to have a clear view of the period of decrease it is necessary first of all to know what the period of increase is, or, in other words, we must first get a collective bird's-eye view of the individual's complete career. I purpose to show that senility has its well-marked place in normal life. It is of great importance that this idea be always present in your minds so that as physicians you may not pass by this period of human life unnoticed, the period when the individual, though not sick, yet is growing old and needs your assistance to grow old normally and prevent his senilization to go on too rapidly or irregularly.

When I called your attention to the fact that senility was omitted as one of the stages through which the living being passes during its existence, it might have been objected that senility is necessarily implied in the last characteristic which the ancients assigned to living beings, viz., that they die. Yes, they do die, but they are born also, and they grow, too, and increase; and these conditions are just the stages through which the living beings pass during their existence and over which writers have always expatiated with such delight.

Let us, therefore, not be astonished at the fact that the period of decrease which conducts the living being down to death was

not considered worthy of more marked consideration, a period which brings into play certain organic laws the evolution of which is of no less interest to pursue than those laws which rule during the period of growth. It is due, no doubt, to the silence in which naturalists have persisted for so long a time about this phase of life that the important question of death seems to have become surrounded with discredit as an object of consideration.

In our own day authors have taken hold of this problem all along the line, and the list of books in which you can read about it with interest and profit is a long one. The latest interesting writing on this subject, and which I would advise you to read and meditate upon, is that by M. Sabatier, entitled "*Essai sur la Vie et la Mort*," Sabatier's studies on growing old—senescence—gave me occasion to borrow much from him.

It is not necessary to enter here upon the formidable question as to what is life. This would take us too far. I myself believe that life could be conceived of as detached from any organized structure, whether animal or vegetable, or even mineral.

Let me explain. Simple bodies which enter into the composition of an element in which life can exist may, strictly speaking, come to be grouped in other and quite different ways. We are not bound at the present day to regard them as the only means by which life can manifest itself. Then these simple bodies which we are so ready to take as the starting point, are they not also

decomposable into other and still more simple bodies? And reasoning further from these premises, we finally, in the last analysis, come to the essence of matter, but of the nature of which science is as yet uninformed. Hence it is that the forms under which life does manifest itself are insufficient to serve as a *point d'appui*, or starting point, in the explanation of life.

Should we desire to enter upon a purely theoretically speculative work, we should have to undertake the arduous labor of analyzing succinctly all the hypotheses that were put forth; and it might not be unprofitable to consider the ideas of Pioger, which, though at times quite speculative, are always interestingly set forth in his work, "*Le Monde Physique*."

For us, however, the question is only one of formulating a correct idea of what a living being is, for it is this that is now occupying us exclusively, and we desire to know it in order to follow it in its evolution and being, and to ascertain at the same time the important modifications which it presents in the normal and in the pathological state.

We know now that organized bodies are combinations of material atoms taken from their environment, to which they return. The first term of the proposition is birth and growth—*nascunt et crescunt*, as the ancients used to say; the last term is the growing old and death—*senescent et moriuntur*. You see clearly that senescence, growing old, has its place—and a grand place it is—in the phenomena of organic life; and according to our conception of the human being this phase ought not to be left in the unilluminated shadow.

In the first chapters of Dr. Létourneau's work, "*Biology*," you will find a cursory critique of the more authoritative definitions of life, all of which suffer from the defect of being either too comprehensive or of not being comprehensive enough.

Létourneau says rightly that it is of more value to clear the field of too many definitions and limit oneself to the principal facts of life that have been observed. He gives the following definition of life: "Life

is a continual simultaneously double movement of composition and decomposition carried on within the plasmatic substance or the anatomic elements which are functioning under the influence of this movement in conformance with their structure."

But is this not a definition rather of a living being than of life itself? And is not this expression, "functioning in conformance with their structure," rather vague and fails to explain the why and wherefore of this structure?

I propose the following definition: "The living being is a temporary individualization of variable form; it is a sum of forces capable of assuring the permanence of the form (once assumed) and of calling forth the determination of similar other forms before it is itself disintegrated."

I believe this definition to be nearer the truth, and if you should find my expression, "sum of forces," to savor of indefinite abstraction, I would defend myself by saying that our language has not furnished me with other words that have not acquired a settled meaning of their own, or which would not become subject to too much discussion.

Matter, as I have said, unfortunately is not known to us as to its essence, but since matter and force do not go one without the other, it would seem to me that the second term might represent an entity more real and less subject to controversy. In the definition you have the affirmation of the principal characteristics of a living being, to wit: Individualization first of all, which means that this being finds in itself the power to assure its permanency, its proper, or immediate, personality; then it has its second, or mediate, personality by procreating a personality similar to itself; and, lastly, it terminates its cycle by restoring to the external medium the elements of its constitution which it has received from it. This last term, the disintegration, is death, and the time in which it is accomplished is "senescence," the period of growing old.

We are now prepared, in a measure, to put the question: Why does the living being die? How does it die?

This will, at the same time, be a study of senescence, of growing old. It is by these general ideas that we will be guided in the study of senilization and of old age in the human being. You see that this excursion into the domain of biology will serve to set out for us the stakes which will guide us in our medical research work applied exclusively to the human being.—[Translated from "Leçons sur les Maladies des Vieillards," by Dr. Boy-Teissier.]

THE TREATMENT OF ASTHMATICS

True asthma is to be looked upon as a neurosis of the breathing apparatus (*l'arbre aerien*) characterized by dyspneic attacks accompanied by disturbances of the vascular apparatus and of the secretions. Immediately before an attack the respiratory function seems to be normal and auscultation discovers no lesion whatever. The attack occurs more frequently at night and announces itself by some gastric prodromata, some constipation and tympanitis, and a slight oppression with dry cough.

The patient is suddenly awakened from his first sleep by an oppressing sense of anxiety and an extreme difficulty of respiration, lasting on the average from two to three hours. The attack goes off gradually, after a viscous and beady expectoration and an abundant diuresis. The patient falls asleep in the morning, but his attacks are repeated many nights in succession, with or without a diminution of their force. I am speaking here, of course, of the *natural* history of the disease, that is, of its virgin state before the patient has undergone any treatment.

As a reflex nerve disturbance in the medulla oblongata asthma is kept up by a point of lesion (asthmatic zone) which may be localized in the nasopharynx, bronchi or stomach (dilated), or more rarely in the generative organs. A neuroarthritis predisposes frequently to this disturbance of the respiratory balance in asthma, to the tendency to its attacks, which may make their first appearance in infancy. It is not rare for asthmatic attacks to cease after the removal of polypi, or on instituting a rigorous

dietetic regimen, or after a curettement of the uterus. Odors, dust, and emotions play a striking part in provoking asthmatic attacks. As to localities, the question is often inexplicable and unsolvable. Asthma is met with more frequently during hot seasons and in hot climates than in winter and in cold climates; it is met with less in low and sheltered localities than in high localities. Violent winds are injurious, and city atmosphere is more favorable to asthmatics than living in the country. Molle has lately demonstrated the harmful action of calcareous clay (kaolin) dust. All these curious etiologies are to my mind just so many eloquent pleadings in favor of the nervous nature of this disease.

Hereditary as neuroarthritis, of which it is an expression, this disease of the rich has its frequent equivalents in migraine, dyspepsia, eczema, and above all in urticaria; asthma is, indeed, looked upon by certain authors as a veritable urticaria of the bronchi. It is probable that we have here to do with analogous toxins which are capable of causing certain vasomotor perturbations in various organic systems. What is certain is that an alimentary regimen, by removing the bodily waste and by moderating the digestive ferments, corrects at the same time the dyspneic attacks and the diathetic manifestations which the ancients called *interchangeable* metastases, acting, as do artificial "issues," against neuroarthritis. Hensch describes a toxialimentary asthma in infants which yields to emetine dosimetrically administered up to the point of vomiting.

At the time of an asthmatic attack the patient must get as much air as possible; he should be reassured; his neck should be freed, and his chest covered with dry-cupping and his lower extremities covered with sinapisms. He should inhale the vapor of a teaspoonful of pyridin from a heated saucer, or the fumes of a powder of datura, hyoscyamus, belladonna, cannabis and potassium nitrate, equal parts, disposed in the shape of a cone and lighted.

I have seen at times an attack of asthma aborted by brushing the pharynx with cocaine, or by the inspiration of ethyl iodide. Every half hour a granule each of atropine,

Gregory's salt, and strychnine arsenate should be taken together. This is the dominant remedy, intended mainly to increase the respiratory capacity. As variants we have aconitine, hyoscyamine and quinine valerianate, which act also on the medulla, the seat of the dyspneic perversion. Lobelin, in half-milligram doses, facilitates expectoration and removes the spasmodic condition of the pneumogastric. This remedy, with good reason, is a component of the anti-asthmatic compound granule, consisting of strychnine arsenate, half a milligram; hyoscyamine, one-quarter milligram; and lobelin, one-half milligram. Lobelin may be given up to three or four milligrams *pro die*.

Atropine was highly lauded by Von Noorden in 1897, and recently again by Terray, and we think this alkaloid the most energetic to be opposed against a severe attack of dyspnea. By giving it dosimetrically, but not to exceed two or three milligrams in twenty-four hours, we avoid atropinism, especially as regards ocular accommodation. Lobelin, according to Schmiedeberg, acts on the nervous system as a succedaneum to atropine; its employment lengthens the intervals between the attacks, and renders them of shorter duration and of less severity, even in case of an intrusion of cardiac asthma. I have no opinion to express on this treatment from personal experience.

All asthmatics must clear their digestive canals from toxins (*desintoxiquer leur tube digestif*) by means of a laxative saline in the morning taken in an infusion of violets or of polygala; by a milk diet, with the addition of one or two cups of weak broth, kept up for some days after an attack; lastly, by enemas of thyme with the addition of urotropin.

Later on the diet should be lacto-ovo-vegetarian by preference.

Should there be a complication with emphysema, then the iodides and bromides (0.25 Gm. of each) and sulphur baths are

advisable, not only as eupneics but also as promotive of combustion (oxidation-metabolism).

In the aged the prognosis of asthma is closely connected with the conditions of the heart and kidneys. The respiratory efforts of the aged should be relieved by a dorsal decubitus, which produces a hypostasis and impedes expectoration. Stenol [a mixture of caffeine and theobromine] and a dechlorination diet will answer as symptomatic medications. In case of a tendency to asystolia we add sparteine or digitalin to the strychnine.

In regard to strychnine arsenate which Dr. Rénon recently advised in the terminal stage of bronchitis, the late lamented Coriveaud affirms from his established conviction, based upon very precise facts, that this salt possesses an almost specific power of contracting the muscles of Reissessen, but on the condition (as he says) that one is not afraid to push the doses, if they do good, to six and seven milligrams a day.

In certain rebellious cases we shall have to think of physical agencies. Light baths overcome the asthmatic bronchitis and in from twelve to fifteen days make the vesicular murmur to reappear, which had been suppressed under the most sibilant and crackling râles. They remove the dyspnea, restore the appetite and the sleep, which becomes regular perceptibly, in proportion as the bronchi are disencumbered. Respiratory gymnastics fortify the bronchi and combat pulmonary insufficiency, reestablish the play of the inspiratory muscles and the permeability of the air-passages, perfect the expansion of the chest and the extension of the diaphragm, by increasing the demand for air. Electricity and mechanotherapy ought also to be of value in this kind of gymnastics, which we can not dilate upon in this short study. Massage, too, has its indication here, and not in a small measure.—Dr. E. Monin in *La Dosimetrie*, February, 1910, p. 26.





The Right Treatment of Rheumatism

RHEUMATISM is a disease which no doctor should undertake to treat unless he has infinite patience, perseverance and willingness to study the materia medica.

Personally, I have been much interested lately in reading an article on the treatment of acute rheumatism written by a professor of therapeutics in one of the largest eastern colleges, and which has been copied or abstracted in several medical journals. The author of that paper speaks of the salicylates as though they were the only remedies that were at all reliable in the treatment of rheumatism, but he nowhere says a word about that vitally important fact, which we should ever bear in mind, always to use the pure salicylates derived from the true natural oil of wintergreen.

The author also says: "Where the salicylates cannot be tolerated, synthetics can be given for the relief of pain." Just think of relying on coaltar heart depressants for the relief of pain in a disease where organic heart lesions are so very prone to occur unless it is promptly stamped out!

It is this kind of treatment of stubborn, obstinate and exceedingly painful disease that leads to our patients' leaving us for Christian scientists, osteopaths, patent-medicine vendors, and all kinds of purveyors of dope for self-quackery.

In starting out to treat rheumatism, there are two vitally essential things to remember.

First of all, cast aside all your foolish, antiquated, obsolete, sectarian notions, if you have any. You will find good rheumatism

remedies in the allopathic, homeopathic, and eclectic systems of practice, and you will need them all. I was going to add "alkaloidal" also, but that would hardly be fair to Dr. Abbott and his associates, as they have picked up and picked out, and incorporated into their method of treatment all the best and most reliable homeopathic and eclectic prescriptions.

Second, you must keep, carry and dispense your own medicine. You must have instruments of precision on which you can rely with perfect confidence. In treating a disease like this one, where so much depends upon your accuracy in prescribing, it will not do to risk having your best work spoiled by the substitution of a poor or inactive preparation of the indicated remedy.

Now, the doctor can rely with confidence on certain pharmaceutical lines that are always of the same exact and definite strength, such as the normal tinctures, specific medicines, and the alkaloids and active principles. He can not rely on the ordinary galenical preparations of the vegetable remedies.

To do good work, the doctor must use salicylates made from natural oil of wintergreen, although much of that sold by certain houses at the present time is probably prepared from natural oil of birch, instead of oil of wintergreen. In any case it is a vegetable product and far safer and more successful than any synthetic salicylate.

Among my most valued curative agents in the treatment of rheumatism are bryonia, gelsemium, rhus toxicodendron, iris versi-

color, pulsatilla, apocynum, cimicifuga, guaiac, veratrum, stillingia, pilocarpus, hyoscyamus, podophyllum, chelidonium, chionanthus, leptandra, etc. If, however, anyone is using alkaloids and other active principles, he can go at his man (or woman) with his bryonin, gelsemin or gelseminine,



Dr. William M. Gregory, Berea, Ohio

iridin, anemonin, apocynin, macrotin, stillingin, and so on.

Just let me, in passing, tell you something about guaiac. Years ago I came across this saying in Dr. H. A. Hare's "Materia Medica and Therapeutics:" "Guaiac was formerly much used in rheumatic and tonsillar troubles, but of late years its place has been entirely filled by the salicylates, which are equally effective and much more easily ad-

ministered." I also came across the following observation about guaiac in Dr. Wm. C. Goodno's work on "The Practice of Medicine:" "A good tincture of guaiac is probably the very best remedy ever discovered for acute and painful cases of tonsillitis." Now, I have abundantly verified the fact, in practice, that Dr. Goodno is right and Dr. Hare is wrong. This kind of stubborn, painful, aching tonsillitis is really a rheumatism of the throat, and in my experience it has promptly yielded to guaiac in every instance, and I never could find many who were benefited by salicylates.

The great secret of success in treating rheumatism is to give definite specific treatment and push elimination. The patients' whole system is foul from retention and absorption of its own toxins. A very successful prescription with me has been gelsemium, bryonia, veratrum, iris, and rhus toxicodendron, a dose every two hours in water, and with this, on the alternate hour, 5 or 10 grains of true salicylate of sodium dissolved in a glass of water as hot as the patient can drink it.

The necessity for giving gelsemium or gelseminine, or aconite or aconitine, or veratrum or veratrine, arises from the fact that all these cases have a very rapid, high-tensioned pulse, and until you relax the patients and let down the pulse, moderately, you are not going to do much in the way of elimination, as their toxins seem to remain locked up in the system. Be sure to cause elimination by means of podophyllin, aloin, leptandrin, hydrastis, capsicum, and gamboge. These rheumatic patients have a torpid, sluggish and inactive liver, and the foregoing combination in granule form, is the best house cleaner for the liver that has ever been invented.

Watch your patient closely, and if there is not a prompt increase in the amount of

urinary solids (uric acid especially) in about twenty-four hours, change your sodium salicylate for tincture of guaiac, and add apocynum or apocynin to your vegetable remedies. Many patients who will not respond at all to salicylates or who get a toxic effect from them, respond beautifully and quickly to guaiac.

If your patient is a woman, add pulsatilla or cimicifuga or macrotin or anemonin to your prescription. If the attack is a very painful one, the remedies can be given oftener, say, every half hour or hour. Later the patient may need the mixed laxative salines, as for instance equal parts of saturated solution of magnesium sulphate, potassium citrate, sodium phosphate, and potassium bitartrate.

WM. M. GREGORY.

Berea, Ohio.

THE PROPOSED ANTI-DISPENSING LEGISLATION

In the August number of *CLINICAL MEDICINE*, and again in our September issue, we referred to the proposed N. A. R. D. resolutions to suppress the dispensing doctor. These have been given wide publicity. Thus, several of the "family" have sent us copies clipped from the *New York Times*, with comments, evidently submitted by some druggist-reader of that newspaper. Last month we referred at some length to the campaign of vilification of the dispensing doctor, now being carried to the laity. A natural sequence of these articles is a letter which we have recently received from Mr. H. Irving Hancock, of the Ferguson-Hancock Laboratories, Blue Point, New York. It is so decidedly to the point, and so filled with suggestions which every doctor should take to heart, that we reprint a considerable portion of it, as follows:

As I am not a medical man, and not interested in any line of the medical business pecuniarily, my interest is wholly that of the citizen and of the man who wants to see cleaner and better medicines employed when they are employed at all. Probably any such law as the druggists seek would fall down under constitutional test; yet the aim of the druggists, of course, is to secure legislation that will ensure their legal right to put their hands in the

pocket of every sick person. I know how many people of very moderate or straitened means, when they find illness threatening in their families, send for the homeopath or other dispensing physician for the reason that this saves adding a druggist's bill to a physician's.

Any such legislation against the dispensing physician, therefore, as is proposed, should be fought, first of all, by the great masses of people so poor that they gladly welcome the present opportunities for getting physician and druggist at the price of the former's bill. The public should be strongly enlightened on this point by letters and articles written to and for the lay newspapers in which it is shown that, with all the general increases in the cost of living, the druggists are now coming forward with privilege or graft legislation which can have only the result of doubling the cost of sickness for the poor man. If this play be made thus directly to the poor man, who has his vote, it will help to show legislators the folly of trying to enact any such legislation for the sole benefit of a numerically small part of the population.

It seems to me that all dispensing physicians should get together and keep this matter constantly before the public for the next few months, showing the public that it is *their* rights that the new move proposes to barter away. Physicians writing such letters to the press should constantly state that, if this proposed legislation gets before the state legislature, it will be raked fore and aft as an outrageous graft scheme against the poor man's savings-bank account. A lot of fighting slogans can be made out of this idea.

The druggists are trying to cover up their howl by declaiming against a physician "compounding" his own prescriptions, on the ground that the physician is not a pharmacist, and is not by training fitted to understand the niceties of compounding. In the mere matter of compounding doubtless this is correct, but I do not believe there are more than a handful of physicians in the whole country who would attempt to compound unless they have also had exact training in pharmacy. The trouble with the howl against "compounding" is that it is used as the screen to place before the word "dispensing."

Now, as to the physician's right to "dispense," any rational patient will agree that he engages his particular physician just because he believes that particular medical man *knows* what medicines to give him. Admitting all that may be said against nonpharmacist physicians "compounding," the whole theory of the state licensing laws is that the physician is the man who, by training, is supposed to know what drugs it is best to give a patient. Now, the dispensing physician—it doesn't matter whether he pins his faith to the Abbott alkaloids, the Merrell tinctures or Squibb's fluid extracts—has the great advantage, in buying his to-be-dispensed goods from a wholesale house, of knowing that his drugs are purchased from a concern having more expert chemical advice and aid than is possible with the small local druggist. In other words, the dispensing doctor who buys his medicines from wholesale houses is vastly more sure of the accuracy of the dose than any medical man can be who writes prescriptions that are filled by the small local druggist from stock of his own making.

The sign, "druggist and chemist," is a familiar one. How many druggists, ten years after graduating from a school of pharmacy, are capable of assaying their tinctures or fluid extracts and stating the dose-value accurately? The wholesaler, with a staff of practical chemists, can know, if he wants to, just what is the strength of any one of his preparations.

It seems to me that, if dispensing physicians everywhere write to their local newspapers, whenever legislation is threatened to prevent doctors from dispensing, and lay the whole graft of the proposition bare, it will show the druggists that they are entering upon a crusade from which they can emerge only with a severe scorching in the public mind. Such dispensing physicians can promise readers of newspapers that, when the legislation comes up before the legislature, the whole grafting idea will be raked fore and aft.

If you start a vigorous campaign, through all your medical friends, against this new game to graft the poor man's pocketbook or small bank account, and if this campaign is made in the daily, instead of in the medical press, the poor man's public will have the whole of the broad end of the game and will know what to do. The druggists are not strong enough, either numerically or commercially, to ride rough-shod over the poor voter's right to have some money left in his pocket.

This is exactly right. Let it be distinctly understood (we have said it often, but it may need repetition) that we have no fight with the druggist. In nine cases out of ten he is a square, honest business man, not especially interested in the politics or policies of his self-assumed leaders. We are intensely interested, however, in the welfare of the dispensing doctor—all doctors, for that matter—and for them we purpose to fight if necessary. If those who are trying to secure this inimical class legislation wish to go to the laity, well and good. In the end they will find that such a fight will bring them neither riches nor honor. The medical profession is becoming aroused and will respond in kind, going with their side (which is the people's side) to the masses, along the lines suggested by Mr. Hancock. We recommend every reader of *CLINICAL MEDICINE* to read this letter very carefully, and to lay it aside for future use. Meanwhile, be alert, and wherever opposition to your interests raises its head, be ready with a club.

ALCOHOL BATHS

Many of my patients believe that an alcohol bath is just *the* thing. I have never pre-

scribed alcoholics for medicinal purposes and do not use medicines containing alcohol if I can use any other preparation.

It only recently dawned on my dense brain that I should advise my patients to cut out the alcohol baths and use something else. (I have always been known as a temperance crank.) I find little or nothing in the books to guide me and should be pleased to have some of the *CLINICAL MEDICINE* "family" write something on this subject for the journal.

E. R. BUCK.

Hudson, S. Dak.

[In spite of the weighty example of the prince of all multimillionaires, Mr. Rockefeller, I do not believe in alcohol baths, or make any use of them. In the application of external remedies we should be governed by settled principles, and by knowledge, not by imagination. I do not know of any use which can be attributed to an alcohol bath, further than what is obtained by the rubbing.

Suppose that we wish to stimulate the skin, to bring the blood to the surface, where it will meet the oxygen of the air, increasing its stock; then the thing to use is a salt bath. This may be either salt sponging, hot or cold; or, what is an excellent method, dip a coarse towel into strong brine, hang it up and let it dry, and after an ordinary bath use it to rub the body. This can be done until the skin is quite rosy. This is not only a useful procedure in the way of increasing the oxygenation of the blood, but it helps to keep the skin smooth and clear of imperfections. It gives an ivory-like texture to the skin, which the ladies think very desirable, and which is not unpleasant to the sterner sex.

Dr. Burgess of Tennessee has shown that unsuspected therapeutic values lie in the application of epsom salt to the skin. I would refer you to his book for further information on this subject. Many observers have noticed a remarkable stimulant power following the use of ammonia in the bath. A tablespoonful or two of ordinary household ammonia in a bathtub of water is said to impart a delightful freshness to the

bath, and a sense of comfort and exhilaration to the person using it.

The ancients employed baths of milk for nutritive purposes. I know the skin will absorb a good deal of nourishment, for I have rubbed lanolin and codliver oil into it to round out the contours, and found it successful.—Ed.]

AN EXPERIENCE CHAPTER

I am sending you under separate cover a picture of myself, my grandson and my



Dr. Wm. A. James and grandchildren, Chester, Ill.

granddaughter, taken in my only means of conveyance. My grandson is twenty-one months and my granddaughter is thirty-nine months old. We have only one child, the mother of these babies, and she lives in Texarkana.

While home this summer I would strap the children into the automobile with shawl straps run through the cushion springs. They could neither bounce out nor get out and would be with me two and three hours at a time. While making a call one morning the young lady of the house came in and said, "Doctor, one of your babies is crying out there."

I finished my call and went out to investigate. I said: "Katherine, what is the trouble?"

She said: "Jimmie wouldn't keep still and I bit 'im."

Jimmie had a right to cry.

I have been using the alkaloidal granules for the past seventeen years, and I will add right here that but for them the little fellow would not be in the picture. When he was three and a half months old he had a very severe attack of bronchopneumonia. I thought for three days that I should lose him, but with the assistance of the granules he made a complete recovery. In former years, under the old plan of treatment, he would have been like David Harum's little boy. I seldom lose a case like the above now, thanks to the granules.

I had two cases some years ago of two old people, man and wife, both in bed at the same time with bronchopneumonia. They were both near seventy. I put them on my usual plan of treatment and for three days the cough grew tighter, the breathing more difficult and the temperature went higher and higher. I saw that something had to be done, and done quickly, or we should have a double funeral. I put them on a solution of aconitine, the anodyne for infants, cactin and sanguinarine nitrate. The next day they were better and continued to improve right along.

The little granules again!

I have had two very severe cases of typhoid fever recently and both made excellent recoveries. The little granules again, plus intestinal antiseptics. I very seldom lose a case of typhoid fever any more.

In high temperatures of little people with nervous excitement bordering on congestion of the brain I add gelsemin until I get "effect," and it is seldom that I do not get the effect desired.

I had a case of meningitis in a little girl one and a half years old and cutting teeth at the same time. Her temperature ranged from 101° to 104.5° F. for three weeks. By the use of the alkaloids, with the application of ice-water to her head, the temperature could be kept down. Her little curls had to be sacrificed but we saved the girl. Whenever the temperature would rise we would give the solution oftener and apply the

ice-water more frequently until it was reduced.

My way of applying cold to the heads of little folks is probably different from the usual mode. I have a cap made of old cotton flannel that will absorb water readily and that will fit the head snugly, then nearby have a little water in a pan with a chunk of ice in it. I instruct the nurse to take a small cloth, kept in the ice-water, and squeeze the cold water on the cap often enough to keep it cool, even though it require this every five minutes. The hotter the head the more evaporation, and it takes heat to evaporate water so you cool the brain and lower the fever. By placing the hand on the cap you can always tell when it is necessary to use more ice-water. It can all be done without any danger to the brain and without disturbing the patient.

My little patient is now four years old and as bright and active as one would wish to see.

I have a case of exophthalmic goiter that I am treating. She is a married lady, age thirty-five, and the mother of five children. She had been ailing about six months. I used various remedies, among them thyroid-ectin. She continued to grow worse right along. I sent her to a specialist, May 11, and he suggested an operation, to which she objected. She went on to her sister's in a small city near St. Louis. She was under treatment there from May 11 to July 20, when she came home and under my care again. I put her on lycopin, gr. 1-6, two such doses four times a day, and the arsenates of iron, quinine, and strychnine, with nuclein, four times a day. I increased the lycopin gradually until she is taking 1 grain four times a day with two tablets of the triple arsenates and nuclein four times a day. She has made a splendid improvement in the past thirty days. Her pulse has dropped from 135 to 105, her nervousness is much better, the goiter is smaller, the choking sensation not so great, and she is sleeping very much better. She says she feels decidedly improved and is gaining in weight. Of course it is too soon to tell what the outcome will be but so far the result is very gratifying.

When I get started on the alkaloids I am inclined to be like Tennyson's brook, so I would best put a dam across it. Please do not put one upon it.

WM. A. JAMES.

Chester, Ill.

[No dam (of any kind) for you, Doctor. Let us have another chapter.—ED.]

A CASE OF PUERPERAL ECLAMPSIA WHICH DID NOT TERMINATE FATALLY

Mrs. E. C., age 33, mother of two children aged eight and four, called on me March 15, 1910, at which time she was eight and a half



Dr. L. F. Van Amberg, Melrose, Ohio

months pregnant. She called to see about her feet, which I found to be moderately edematous. A specimen of her urine gave a specific gravity of 1020. No tests were made for albumin. The patient assured me she would be confined before the expiration of the month. I ordered her to bandage the feet and legs up to her knees and to keep the bowels loose with laxative salines and await delivery.

I was called at 9 p. m., March 31, to attend her in labor, which was normal in all respects

and was concluded at 11:30 p. m. I remained with her until 1:30 a. m. About an hour before I left the patient complained of "hurting" across her chest. I gave her 1-4 grain of codeine, and when I left she was feeling comfortable.

April 1, at 6 a. m., the nurse telephoned me that my patient was having severe pain in her head and was vomiting. I ordered her to give another tablet of 1-4 grain codeine. At 6:30 she telephoned me that the patient was sleeping, but at 7 a. m. I was advised to "come at once, the patient has just had a terrible convulsion."

Eight a. m. found me at her bedside (after having gone seven miles). I found my patient in a semiconscious state, with considerable rigidity, and labored respiration; she could be aroused enough to swallow liquids.

At 8:15 I began treatment by giving 1-2 grain elaterium. I also prepared a solution each teaspoonful of which contained:

Chloral hydrate, grs. 2; spec. med. veratrum viride, gtt. 1-4; spec. med. belladonna, gtt. 1-4; spec. med. gelsemium, gtt. 1-4; spec. med. cactus, gtt. 1-4. I gave a teaspoonful of this mixture every fifteen minutes. I also began administering nascent oxygen, which I used almost continuously for two hours, when by rupture of a tube the generator was made useless.

At 9:15 I gave another 1-2 grain of elaterium, and at 10 a. m. 6 grains of calomel. The chloral mixture was given until 4:30 p. m. Patient was catheterized at 1:30. Chloroform was given as soon as convulsions began and continued only during the seizure.

At 4:30 the patient was unconscious. Total number of convulsions seven. She was now placed under chloroform and not allowed to have another convulsion.

At 5:30 I gave croton oil, 2 drops mixed with glycerin, 2 drops, on the tongue. Bowels began operating at 7 p. m. There was no use trying to count the number of movements; she was discharging watery evacuations all the time. The patient's bed was protected with a rubber sheet over which blankets were folded. These were changed

three times before midnight and twice between midnight and 4 a. m. Each time the blankets were saturated. The patient was kept under chloroform until 3 a. m. I gave cactus hypodermically at midnight, also at 4 a. m. Bowels kept active almost all of the ensuing day.

April 2, the patient awoke at 9 a. m., rational. Her temperature stood at 99 throughout the day. Pulse 110.

April 3, the temperature came up to 100.8° F.; pulse 118. Lochia became fetid. Gave her echafolta, 5 drops every hour. Hot douche every three hours. (Ordered calcium sulphide from Chicago, as I was entirely out of supply.)

April 4, temperature came up to 101° F. and discharge was terribly offensive. Increased echafolta to 15 drops hourly and gave nuclein, two tablets every three hours. Laxative given.

April 5, temperature 101. Night sweat. Treatment continued.

April 6. Temperature at noon hour 101.4° F., at which time I began using calcium sulphide, three granules every two hours, also gave echafolta, 15 drops every hour, and two tablets of nuclein every two hours. The uterine discharge was terribly offensive. Three days of treatment brought everything normal. Patient improved rapidly. I continued this treatment for five days, when I placed her on iron and nuclein. Improvement was continuous.

May 5. Patient up and around caring for her babe and overseeing the household. Had convulsions begun before delivery I should have treated the case the same and attended to the delivery later. I believe elimination to be of main importance in this disease. I have treated three cases as herein stated, and all recovered. I have never known of a single recovery where the main effort made was to control the convulsions with anodynes and elimination was neglected.

L. F. VAN AMBERG.

Melrose, O.

[Dr. Van Amberg is dead right in putting the emphasis upon elimination. Though not altogether pleasant, the catharsis induced by

elaterin and croton oil is exceedingly effective. In addition we advise the use of veratrine, given hypodermically, "to effect," as shown by slowing of the pulse. In threatened convulsions a granule of the veratrine may be given every ten minutes by the mouth. Hyoscine, morphine and cactin will control the convulsions.—ED.]

AN EXCELLENT PRESCRIPTION

We have borrowed one of McCutcheon's cartoons from the *Chicago Tribune*. Though it is a little late in the season, there are still

accelerated. Temperature 104.5° F. the first day. Very slight nocturnal remission for the first two or three days. In about five days there was a decided morning and nocturnal remission. In a few instances her axillary temperature was 105° F. Skin very dry. There was hebetude, complete anorexia, great thirst.

My course of treatment was as follows: A purge of fractional doses of calomel followed by salines. Then I put her on a combination of zinc sulphocarbonate and salol. I also used some acetanilid, which a good many condemn, but I have always been very careful and have had success with it. I used caffeine citrate for the headache. She always complained of headache, pain in the neck, and her stomach was very tender. In eight days she did not have any fever. I ordered cool sponging every three hours, ice-packs, milk diet, etc. I let her eat ice-cream, and gave her soda-water to drink. Some say that the latter will increase meteorism, but I had no trouble in my case. My principal remedy was the zinc sulphocarbonate with salol, in connection with sponging.

Was this case one of typhoid fever? Some of

the neighbors have become very skeptical because the fever lasted only nine days at the longest. The little patient had delirium at night and sometimes in the day. The only thing I have to deal with now in her case is a tonsillitis that is very annoying. As I have not had so many cases of typhoid as the elder brethren I want to hear from the fathers of the profession. I am treating another case the same way.

Do you know anything about or have you heard of horsemint for bathing in typhoid fever? I will say, gentlemen, if you boil the whole weed and give your pa-



some of your patients who might be benefited by this prescription. How about taking it yourself? I know a good place! And where they are big!!

A CASE OF SUPPOSED TYPHOID FEVER AND HORSEMENT BATHS

I have had a recent experience in a case which I called typhoid fever.

I was called to see a very delicate girl, about six years of age, on Monday. She was taken ill on the Saturday previous. I felt her pulse, which was strong, and a little

tient a good hot bath in this water, then wrap him up and let him sweat, it will bring down the temperature when other remedies have no decided effect. I am not an "herb doctor," but I have tried this with good results following. I want to know if there can be any efficacy in this course, or is the improvement merely imagined by me? I know that horsemint is carminative, diuretic, etc., when given internally, but of its external action little seems to be known, so far as I can learn.

A. L. SANDERS.

Purcell, Okla.

[Dr. Sanders does not give data enough for us to express an authoritative opinion. The case certainly *looked* like one of typhoid fever and it was good sense to treat it as if it were such. A Widal test, made after the first week, even during the period of convalescence, will generally dissipate any doubt as to the doctor's diagnostic accuracy. Physicians should resort to the laboratory much more often than they do. Most of us do not appreciate what a tremendous help such reports may be.

We hardly need to say again how enthusiastic we are with regard to the sulphocarbonate treatment. The beauty of these salts is that while they effectively "clean up" the intestinal tract they are practically free from toxic action. Most of the phenol derivatives are broken down within the body, with danger of subsequent carbolic-acid poisoning. Even salol is not entirely safe, inasmuch as smokiness of the urine not infrequently follows the use of even moderate doses.

The scientific name of horsemint is *monarda punctata*. It contains an abundance of essential oil, *oleum monardæ*, yellowish or brownish-red in color, of a sharp taste and aromatic odor. This oil has been shown to contain more than 50 percent of thymol. Is it not possible that thymol when applied to the skin may have an antipyretic effect somewhat similar to that of guaiacol? Internally used, horsemint is carminative, diuretic and diaphoretic. The oil is used locally for the relief of pain, as in neuralgia.

However, what about the action of the hot bath itself?—Ed.]

THE CHARLOTTE SANATORIUM

We have just received the first annual report of the beautiful Charlotte Sanatorium. We are especially interested in this institution because our old and good friend, Dr. Register, of *The Charlotte Medical Journal*, is the vice-president and we presume one of its leading physicians. The Sanatorium seems to be a splendid institution, and judging from the report of cases, it is already doing good business. Physicians living in the contiguous territory will do well to correspond with Dr. Register.

OBSTINATE HICCOUGH

Since beginning the practice of medicine it has been my lot to treat quite a number of cases of obstinate hiccough.



Dr. J. D. Hayward, St. Louis, Mo.

I shall briefly mention some of the methods I find useful in combating this distressing condition.

Hiccough is a spasmodic action of the diaphragm while at the same time there is a sudden closure of the glottis during the inspiratory act. We may correctly assume that the sensory disturbance is conveyed to the center by the pneumogastric, at which point it excites a motor impulse which is reflected over the motor filaments of the phrenic and recurrent laryngeal nerves to the muscles of the diaphragm and glottis.

On one occasion I was called to treat a lady at the St. John's Hospital. She was almost exhausted from persistent hiccough-

GALLERY OF POPULAR FAVORITES



DR. JOSEPH MACDONALD, JR.

Of East Orange. Member of the Board of Education; Managing Editor American Journal of Surgery; President of the American Medical Editors' Association; Officer of Grand Commandery K. T. of New Jersey.

ing which had continued three days, resisting all medication. I was able to control this condition by applying firm pressure for about three minutes to the phrenic nerves, over the scalenus anticus muscles. The hiccough never returned, and the patient recovered from a surgical operation which she had just undergone.

In another case I met with success by reinforcing the above treatment with the use of Dana's method, which consists in laying the patient upon a table in the supine position

with the upper half of the body hanging over the end. It will be seen that this arches the thorax, spreads the ribs and brings tension on the diaphragm, inhibiting the spasm.

It is sometimes advisable to have an assistant make intermittent traction on the tongue while the foregoing is being applied. Don't leave your patient without applying hot applications over the cervical spine and a bandage around the body. Give a hypodermic of hydrochloride of pilocarpine. This condition calls for antispasmodics, which are best administered in the form of the active principles or other exact remedial agents, such as hyoscyamine, cicutine and monobromated camphor. And remember the advice to "clean out, clean up and keep clean."

J. DAWSON HAYWARD.

St. Louis, Mo.

[I am glad Dr. Hayward added that last sentence, especially the advice to "clean out." I remember one case of hiccough that resisted all the sedatives and all the pet expedients. A *big* dose of castor oil (two ounces), thanks to the copious evacuations which followed, made a cure!—ED.]

MACDONALD—"A POPULAR FAVORITE"

In the Orange (N. J.) *Daily Chronicle* we see the picture of Dr. Joseph MacDonald, Jr. as a member of that newspaper's "gallery of popular favorites." We are reproducing the picture herewith. It will be noted by the caption that Mac is a "concentrated citizen." We can further testify that as a man he is a prince, and in business a booster of the first rank. His journal needs no praise—a sample copy carries conviction as to its merit.

A PROTEST FROM AN ARMY DOCTOR

IN THE AMERICAN JOURNAL OF CLINICAL MEDICINE for August, there appears an article by Dr. Charles Stuart Moody of Idaho. On page 849 of the journal he makes reference to the Field Chest of the Army Medical service which, to say the least, I think disrespectful. I quote the words: "I

shall not even *unlock* the handsome medicine-chest filled with archaic remedies furnished the state troops by the United States Government, but shall confine myself to my case of alkaloids entirely."

This, from a medical officer of the organized militia, might, perhaps, lead a few to believe that the Army Medical Department was using the medical supplies which Noah left after his exit from the ark. To correct any false impressions among readers of this article, I wish to say the following:

From what I know of the medical practitioners in private practice, and of the army medical officer, the latter is years ahead of the great majority of practitioners in private practice both in the diagnosis and treatment of disease. Every appliance, drug or serum is given him that he may be so. The therapeutics of the future, from all present indications, will be in the nature of serums and vaccines. In this department of therapeutics the Medical Department of the Army is the leader.

The "handsome field-chest" and contents, of which Dr. Moody speaks, is the same one used by the U. S. Army as a field-chest. If Dr. Moody would only *unlock* it and see what it really contains he would find that it contains some of the alkaloid "epsom" of which he writes.

After much experimentation and deliberation the contents of the field-chest have been selected because of their compactness and value in campaign. Among them are the following:

Amyl nitrite pearls	Arsenic trioxide
Magnesium sulphate	Bismuth subnitrate
Acetphenitidin	Caffeine citrate
Boric acid	Codeine
Calomel	Apomorphine hydrochloride
Atropine sulphate	Cocaine hydrochloride
Digitalin	Glyceril nitrate
Hyoscine hydrobromide	Morphine sulphate
Quinine hydrochlorosulphate	Strychnine sulphate
Quinine sulphate	Potassium iodide
Salol	Alcohol
Sodium salicylate	Aromatic spirit of Ammonia
Glycerin	

This is about half of the complete list of medical contents, and I can see nothing "archaic" about it. Even if Noah had given Ham a little calomel at night and a little magnesium sulphate in the morning this would not detract from their usefulness at the present day. Even a little "nip" of a dilute solution of the alcohol which Noah no doubt had use for would not be considered absolutely bad treatment by many of our present-day practitioners.

To conclude, I, myself, see very little difference between the contents of the alkaloidal case and the field-chest of the U. S. Army, and in my opinion any broad-minded man could easily adjust himself to the use of either, especially in a maneuver or real campaign.

PAUL W. GIBSON.

Yellowstone Park, Wyo.

VERATRUM AND VERATRINE

Dr. George L. Servoss of Fairview, Nevada, is investigating the action of these two remedies in the treatment of puerperal eclampsia and will be very glad to hear from anyone who has had experience with either or both.

MORE SUGGESTIONS FOR THE YOUNG DOCTOR

The medical student, as he starts out into the world with his diploma, is like the prospector out west starting to look for a paying mine. He may find one and he may not, but the medical graduate who has a drug-store experience beforehand, and is a graduate of pharmacy, has a big advantage over the graduate who has had no pharmaceutical experience.

I believe that therapeutics is the most important branch in medicine, and therapeutics is the most neglected study in all of the medical colleges of America. It would be far more desirable if the preliminary requirements for entering a medical college included two years in a pharmaceutical college rather than the same time in a high school or college. The young medical graduate is compelled to study the treatment of

different diseases as the books advise, but had he a thorough knowledge of therapeutics he would meet the symptomatic indications in the patient with the required drug or drugs, even before a diagnosis could be made, and that is also where the "alkaloidal" man gets a big start on all diseased conditions. He treats the patient with positive medication, and diagnoses his case later.



Dr. B. H. S. Angear, Sublette, Ill.

I have been an "alkaloidal man" for twelve years. This is due to the constant drilling that my professor in Practice of Medicine, twelve years ago gave me—Prof. W. F. Waugh. It is his insistence upon the alkaloidal treatment of diseased conditions that gave me a foothold in the medical profession, and to keep that foothold I find the following things necessary, which I pass along as "advice" to other young physicians:

Spend three or four days every month at some good clinic.

Never allow yourself to speak disrespectfully of or cast any slurs on any fellow practitioner. Let the other fellow run you down all he wishes. Knocking never hurts. It is the pig that is hurt that does the squealing.

Spend some money on new books, study new things, and above all keep yourself and your office looking modern and up to date. If you do these you are bound to succeed.

B. H. S. ANGEAR.

Sublette, Ill.

"GIVE US EFFICIENCY"—A SOCIALISTIC CRITICISM

Your opening editorial in the August number, "Give Us Efficiency," leads me to refer, in a few words, to your illustration of the work going on in the factory. Look around, if you please, and you will see factory goods for sale on all sides. It would seem as though too many goods were being produced, and not sufficient money among the populace to buy them. This overproduction, as some call it, but which in reality is underconsumption, is what brings on panics; and this condition now exists to such an extent that millions of willing workers are experiencing a panic-effect all the time. So this condition is due to the lack of money earned, more goods being produced than the wages of the masses will buy back.

Statistics show that commodities to the value of twenty-five billion dollars are brought into existence every year, and labor does it all; and yet the same statistics show that the amount of wages received for the work is less than six billion dollars. In the factory line the need is not more goods but more money to the producer.

A worker puts his life into his work, and anybody getting any portion of the product is taking a part of that worker's life.

Let us be consistent and help the workers get justice. Let us help them to free themselves from this unnatural condition. Let us help give the workers the social value of their labor, which is more than five dollars

a day for eight hours. If we do this, no man will need to send his children to the factory. This would take 2,000,000 children—future parents—out of the factory and send them to school. It would save them from a stunted life and give all freedom. No man would then allow his wife to be a wage-slave to another man. Prostitution would practically cease. Political corruption and graft would disappear, and instead of bearing the ills of society, people would actually live.

Compared to the doing away with the heinous crime, the robbing of the workers of fifteen billions of dollars, which forces the things enumerated, the efficiency of medicine is as nothing, since the removal of this robbery would remove nine-tenths of all accidents and practically all occupation-diseases, three-fourths of which could be avoided if we could eliminate the unfavorable conditions of work.

Suppose you give this question "five minutes of thought a day" for a month. Order from Chas. H. Kerr & Co., 118 Kinzie St., Chicago, Ill., a copy of Rev. Chas. Vail's "Scientific Socialism," remitting 32 cents, and learn a colossal truth.

GEO. B. KLINE.

Wheeling, W. Va.

ECONOMIC FACTORS IN DISEASE

In last month's issue of *CLINICAL MEDICINE* (August, 1910) the quotation from Dr. Cabot's book, "Social Service and the Art of Healing," strikes a very tender chord in my heart. For many years the evolution of disease, especially from the standpoint of economic environment, has engrossed much of my attention. And being naturally sympathetic and of an altruistic and patriotic turn of mind, I have given the subject a great deal of study.

As I study and reason back from effects, i. e., the disease, to its cause or causes, whether primary or remote, the conviction grows on me that from nine-tenths to nineteen-twentieths of all our diseases and premature deaths are due solely to easily avoidable causes inhering in unnatural economic

conditions. Moreover, these causes producing not only disease but poverty, crime and race suicide generally are increasing much faster than the increase of population, notwithstanding all our wonderful advancement in surgery, therapeutics and prophylactics.

Is proof needed of these assertions? It shall be forthcoming, although space forbids that I should give more than a few lines—just enough to serve as an eye-opener.

A comparison of the census reports from 1850 to 1900 and the forthcoming abstracts for 1910 show that, while our population has increased about 170 percent, crime has increased 445 percent. From these official sources, and further from the Labor Report, to Congress, of Carroll D. Wright we learn that both the renters and the out-of-work classes are increasing three times as fast as does our population. Less than 9000 of the 400,000 homes in New York are owned by their occupants free from debt. In 1889 15.1 percent of the laboring people of this country were unemployed. By 1889 this class had increased to 22.3 percent, and in 1903 it was 49.81 percent.

These conditions have been greatly aggravated by the financial depression beginning in 1907. In 1908 it was estimated that about 6,000,000 laboring men were out of work either all or much of the time. Counting five to a family, this means that some 30,000,000 of our people, or about one-third of the population, were having a hard fight to keep the wolf from the door.

As to the causes of this unemployment, the 18th Labor Report states that 56.96 percent were due to "closed establishments," 23.56 percent to sickness, and only 26 percent to intemperance.

Our prohibitionists who assert drunkenness to be the cause of most of our idleness, poverty and disease, should make a note of this official report presented to Congress after a most diligent canvass of all the various lines of occupation in more than thirty states.

Add to this the fact that the cost of living to consumers has increased about one-third during the last decade, and that without a corresponding increase in wages. Note also

the fact that the multiplication of labor-saving machinery, throwing men out of work, continues. The natural increase of population and the consolidation of the great financial interests into trusts and combines also keeps pace with the increase of the out-of-work classes. Competition among those seeking work grows sharper every day, therefore their income must decrease relatively.

So, then, we have the conflict between the relatively few: on the one hand capitalists, who own the railroads, mines, factories and all the best-paying industries, and the millions of propertyless consumers on the other.

And this is the class-conflict, one which is growing fiercer with each passing day. "Oh what shall the harvest be?" I dare not elaborate. But I beg of the 30,000 doctors who read *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* to read between the lines, to think—to think of the millions looking for work; of their loved ones, watching, brooding, waiting; of the other millions whose jobs are so uncertain; of still other millions on starvation wages; of the 1,700,000 wage-slave children in the factories of the southern states, whose bodies and souls are being ground into gold to satisfy the greed of capitalism. My good doctor, pray think of the slow starvation of the toiling masses; of the unhygienic conditions into which they are forced; of the "heavy-brooding men, the tired, anxious women, the thinly dressed, unkempt little girls, the frail joyless little lads," as Hunter, in his "Poverty," has put it.

And all this going on in the midst of natural resources the most abundant!

Surely, most of our diseases have their roots deep down in the poverty, ignorance and unhygienic conditions which grow naturally out of our crazy, beastly economic system. We are financial cannibals. The future historians will so write us down.

And, now, what of the remedy?

First of all, the remedy must be an economic one, inasmuch as the disease of the body politic is of an economic nature. Cooperation must succeed the present competitive system. The nation must own and operate, in the interest of all the people, all

the great natural monopolies, just as we publicly operate the schools, the mails, and numerous other affairs of society. This will settle the poverty question. Under such a system every man would be sure of employment and of receiving the full results of his labor, whereas now out of every dollar he earns by his work he gets but seventeen cents. It will settle the strike-problem by doing away with the cause of all such catastrophies. It will do away with all warfare forever. It will give every man who so desires a happy home—the strongest fortress of any nation. It will lay the ax at the root of intemperance, of prostitution, and of all crime. It will repress the demon and encourage the angel in every individual. Best of all, it will do more than anything else to hasten the time foretold in the Bible, when none shall say, "I am sick," when "a child shall die a hundred years old." It will replace the present rule of gold by the golden rule. It will pave the way for the coming of the "new heaven and the new earth wherein dwelleth righteousness." I believe doctors should lead in this most noble work.

S. J. BROWNSON.

Arlington, Tex.

[As it is our policy to give our readers a chance to be heard on every question raised in our journal we are printing this month two representative articles from doctors who are also socialists. Let it not be assumed that we indorse their position, or that we believe that the remedy which they propose for the evils, some real and some imaginary, which they recite is the only one of value, and a "specific". That, with the changing of society following the absorption of the land, the marvellous increase in labor-saving machinery, and the consequent growth of great fortunes side by side with widespread poverty, these are great problems pressing for solution no thinking man can deny. The evils are here and must be abated. But some of us still believe that no new order can be established and persist which goes counter to that great law, which is essentially individualistic—the law of natural selection. It is *initiative*, after all, which is behind progress,

and no man can tell to what degree this might be prevented or destroyed by the coming of the socialistic state. It is untried, an experiment, a leap into the dark. However, lest we may be tempted to reply to these excellent presentations, with the spirit of which we are fully in sympathy, we will invite some reader of *CLINICAL MEDICINE* to present the other side. We can print but a single article, and this must be a short one—say 1500 words at the most. Who will volunteer? With that article the discussion must be closed.—Ed.]

OPENINGS FOR PHYSICIANS

There is an excellent opening for a lady physician in a South Dakota city of 5000 people. An alkaloidal practitioner is wanted. We shall be very glad to put the right party in touch with this opportunity. We suggest that if you are a lady physician, an alkaloidist, looking for a promising location, you communicate with us at once.

We have also been asked by a Colorado land company to find a bright young doctor to locate on their colony. About 1000 people tributary.

QUININE IDIOSYNCRASY

A patient of mine cautioned me not to give her any quinine, as she could not tolerate it. With no idea of administering it, but for the sake of its admirable tonic effect, I gave her the arsenates of iron, quinine and strychnine with nuclein, four granules three times a day. The next time I saw her she was all right, but said she had to stop the pills before they were used up, because of the quinine effect. She had discovered the presence of quinine before she had taken a third of a grain of the arsenate, divided into 1-67-grain doses.

I haven't given the name of my patient, date, number of her children, husband's occupation, or anything by which she, or her neighbors, can recognize herself if this should accidentally get into her hands. Maybe this spoils any good effect the item might have, but it would fill me with honest

glee to hear of some one of these doctors facing a suit for damages after publishing one of their verbatim copies of their private case-records, identifying their patient so that any blackmailer could locate her in an hour, and all to no purpose, but to fill out the column.

"C."

[There is considerable worldly wisdom in our correspondent's concluding paragraph. While it is important to have every detail concerning the case which may possibly throw light upon it, we need not say too much about the patient, *nor about the professional competitor*. Essential facts are wanted—and these boiled down to the limit.—Ed.]

ECHINACEA IN SNAKE BITE AND INSECT STINGS

Anent the contribution of Dr. I. N. Moyers in your August number I wish to say that I use echinacea, not only in snake bites but in bites and stings of other venomous animals and insects. There may be a difference in the echinacea and consequently no argument. I have used Lloyd's and found it good and effective. I have had a similar experience with Merrill's, and I have used Abbott's, containing absolutely no alcohol, with invariably good results.

Perhaps there is something in my manner of treatment. My method is: First, bandage above the bite if in a limb; then make a free incision and allow the poison to flow away as much as possible. This wound I now dress with gauze saturated with fluid extract of echinacea or Abbott's tablets, crushed, and sufficient warm water added to make a thin paste. I invariably give the patient a hypodermic injection of digitalin. I follow at once with a tablet of echinacea every half hour, dissolved in warm water, or rather crushed and mixed with warm water.

For spider bites and stings of scorpions I do not make an incision but rely on sucking the wound, as a rule injecting digitalin, and give echinacea, as in snake bites. As to whisky or alcoholic drinks, it never enters my

head to prescribe them and I do not allow them given if suggested.

I have seen several infants dead from other treatment (or no treatment) as a result of scorpion stings. I never lost a single one under digitalin and echinacea. Consequently I believe in the efficacy of the treatment.

I never use alcoholic stimulants in these or any other cases. The longer I live the more I become convinced that alcoholics are injurious both in health and disease.

F. D. GREEN.

La Dura, Sonora, Mex.

[It seems by this letter and the one that follows that echinacea is not without friends. As a matter of fact there have been hundreds of communications to the medical press by physicians who have used this remedy in the treatment of snake bites and found it good. The eclectics, particularly, have always claimed unusual virtues for it in such conditions and the mass of substantiated evidence is large.

Echinacea was apparently first used medicinally by Dr. H. F. C. Meyer, of Nebraska, about 1870. He brought it to the attention of Prof. John King, of the Eclectic Medical Institute, Cincinnati, and among the claims made for it, in the former's correspondence with the latter, was that it had an antidotal action upon the bites of various insects, and especially of the rattlesnake. Meyer stated, according to the "American Medical Dispensary, that he even allowed a rattler to bite him, then bathed the wound in the tincture, took a dram-dose internally, and the next day was none the worse for the injury.

Prof. King, in commenting upon this incident, said: "He even kindly offered to send the writer a rattler eight feet long, that the antidotal influence of the tincture upon dogs, rabbits, etc., bitten by said serpent might be tested; but having no friendship for the reptile, and being unaccustomed to handling the poisonous ophidian, the generous offer was courteously declined."

While the glowing reports of some of the earlier users of this remedy may have been rather highly colored, the clinical tests to

which it has been put have been so many and so trying that it seems unwise to deny that it has very great value. In our opinion it is a remedy deserving of a very extended use.—ED.]

SNAKE BITES IN ARIZONA DESERTS AND MOUNTAINS

I received my first copy of CLINICAL MEDICINE this morning and it being new to me I read the advertisements and all. If I may be permitted to answer I. N. Moyers of Speedwell, Tenn., I may be able to help him. I was surgeon for several gold mining companies in Arizona, located in the mountains and in the desert, and have had some



Dr. P. G. Capps, Cisco, Ill.

experience with the rattler, centipede, scorpion, tarantula and other "varmints" of that country.

I have fitted out quite a number of prospectors and cattlemen with emergency cases for the treatment of bites and stings and my advice is as follows: In the case of snake bite, tie off the wound at once with anything handy, i. e., a rope, bridle-rein, belt, shoe-

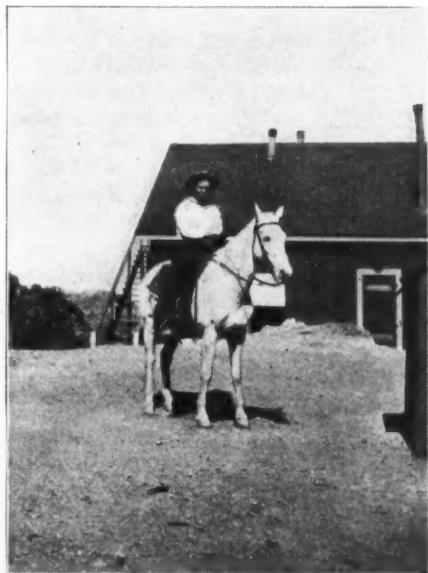
string or handkerchief; twist tight; suck the wound if possible at once, then cut it open in the form of a cross; push one or two tablets of potassium permanganate, one grain each, to the bottom of the cut; inject another tablet around the wound by ten or fifteen punctures into the muscular tissue. Give 1-15 grain of strychnine every thirty

This treatment does not provide for the hydrophobia skunk. For that I used the Pasteur Institute treatment of Chicago with success in two cases, with no mortality.

Whisky won't keep on the desert or mountains. I very seldom saw any five miles from camp. We worked without it.

P. G. CAPPS.

Cisco, Ill.



Dr. P. G. Capps in "wild-west" style

minutes, or as often as necessary. Gradually loosen the cord. Use morphine to control the pain and hyoscine for delirium—from 1-100 to 1-8 grain.

My assistant and I on one trip through the mountains agreed on starting to suck the other fellow's wound in case of a bite.

My emergency case for those who wanted it on trips consisted of a hypodermic case, syringe, water, one tube tablets, one grain each, potassium permanganate, one tube 1-30 grain strychnine nitrate, one tube morphine, 1-4 grain, and atropine, 1-150 grain, and hyoscine, 1-100 grain. A pocket or hunting knife or safety razor will suffice to lance the wound. Better an abscess than a dead man.

This is the recognized treatment for such cases as argued out by the State Medical Association of Arizona.

ECHINACEA IN SNAKE BITE

In the August issue of *CLINICAL MEDICINE* Dr. I. N. Moyers of Speedwell, Tenn., reports a case of a young man bitten by a copperhead snake, treated ineffectively with echinacea. The doctor says: "I soon found that it was a fact that echinacea, which has been claimed by a few to control snake venom, was as worthless as a hundred other vaunted remedies." He praises whisky as the most reliable remedy in conditions of this kind. He says he used echinacea in large doses, but does not tell us what preparation he employed, or the dosage. These would be interesting facts.

Is echinacea of value in snake bite? The eclectics claim that the antidotal effect of echinacea is not only quicker but more thorough and more certain than that of any other known remedy employed for the relief of such dangerous conditions.

Lloyd Brothers of Cincinnati publish a pamphlet containing reports from twenty-five physicians practising in the southern states where venomous reptiles and insects abound and where snake and insect bites are of common occurrence. These reports embrace thirty cases of poisonous insect bites and stings, including tarantulas, centipedes, stinging lizards, spiders, red ants, bees, etc., and twenty cases of snake bites, including those of rattlesnakes, copperheads and moccasins. In all these cases echinacea was relied upon solely as the remedial agent, Lloyd's echafolta and specific medicine echinacea being the preparations used. In two cases only (spider bites) was there apparent failure. The remedy was employed both locally and internally in doses ranging

from 15 drops to a teaspoonful or more every half hour or hour until improvement was manifest.

Now, can it be possible that all these men were mistaken? Is it possible that a worthless remedy could produce the satisfactory results reported by a score or more of competent therapists? No fatalities are mentioned though some apparently hopeless cases are described. Echinacea is given credit for the results obtained, the swelling and pain subsiding rapidly after the administration of the remedy "to effect."

Is echinacea a dependable remedy in accidents of this sort, or is there something better? Will those who have had experience tell us?

J. L. SHEPPE.

Mt. Sidney, Pa.

ECHINACEA IN SNAKE BITE

I have just finished reading Dr. I. N. Moyers' article on snake bites, in *THE CLINIC*. I want to ask the Doctor what he would give if he lived in a country where he could not use alcoholic stimulants. I have treated many cases of snake bites where it was impossible to get any whisky or other alcoholic stimulants at all, and I have never lost a single case. What would you use for stimulation in such a case, Doctor? I will tell you what you would use. You would use the best stimulant that our Pharmacopeia gives, and that is strychnine.

I want to give you a short history of some cases I have treated in the last few years. I lived in the western part of Texas, where there were a great many snakes. In July, 1908, a boy, sixteen years of age, was bitten by a large rattlesnake. He was brought to my office from a distance of seven miles. They had no stimulant to give this boy. They corded above the elbow. The boy was bitten on the wrist. It was swollen very badly when they got to my office, about an hour after he had been bitten.

I gave the boy, as soon as I could prepare it, 1-60 grain of strychnine sulphate. Then I sponged the boy's whole arm with a bichloride solution. I removed the bandages

and as early as possible dressed the wound with echinacea and gave the boy 6 drops every three hours. I kept the dressing moistened every three hours with echinacea, and continued the treatment until the patient was well.

I was called to see a girl in August, 1909, bitten on the foot by a small rattler. She was ten miles from where I lived, so I drove to see her, in my buggy. I suppose I was an hour driving this distance. When I arrived at the gate I was met by her father who said to me, "Doctor, hurry, my daughter has been bitten by a rattlesnake and I fear she will die."

Of course she was very sick and vomiting. They had her leg corded very tightly. I soon gave my stimulant as before, strychnine sulphate, only I increased the dose to 1-40 instead of 1-60 grain hypodermatically. I did not have any alcohol to give her. I loosened the cord about the leg and dressed her foot as before. She got well, as all other such cases have in my practice, but soon after she was attacked by typhoid fever and it carried her across the dark river.

Third case, only in August, 1910. A boy about fifteen years of age, was brought to me bitten by a cottonmouth moccasin. They tell me this is a very poisonous snake. He was bitten on the left hand, which was swollen very badly when they brought him to me. He had his arm corded very tightly. As there were several others with him, some of them had a bottle of "snake-bite," as luck would have it. They began to pour it down the boy. They gave him about eight ounces of this "medicine." When they got to my office he was decidedly under the influence of the alcoholic stimulant. Shortly after he had taken the whisky he began vomiting. His arm was badly swollen. I gave him a hypodermic of strychnine, 1-40 grain, as in the other cases, then I loosened the cord and gave him echinacea. I dressed the wound just as before, and the patient got along fine.

I have never had any sloughing from any case. I consider echinacea a specific for snake bites, just as quinine is for malaria.

I use aromatic spirit of ammonia for bee stings. I like CLINICAL MEDICINE fine. I can endorse Dr. W. A. Bates' treatment for heat fever.

E. B. ELLIS.

Barry, Tex.

ANOTHER "SNAKE" REMEDY

I have just read "Snake Bite—Echinacea," on page 902 of the August CLINIC. For ages the Indians of California have used a weed for rattlesnake bites. It goes by the name of rattlesnake weed. I know no other name for it. On going through a patch of it your clothing will be covered with the burs. On taking a dose of it internally there is a "thrill" that goes all over you—a little similar to that from liquor. The Indians, and also the whites, consider it a great medicine. I suppose any wholesale druggist could get it.

F. POLLARD.

Fresno, Calif.

[Who knows anything about "rattlesnake weed"?—Ed.]

SNAKE BITE—ECHINACEA

Dr. Moyers' article, page 902, August number of CLINICAL MEDICINE, leads me to report a case of snake bite.

Virgie D., white, seven years old, was bitten on the front of the right foot, above the instep, by a copperhead snake, about 7:30 p. m., July 20. I was called about an hour later and saw the child about 9 p. m. The marks were very distinct. A tight ligature had been placed around the ankle and a dose of whisky administered.

The foot was dark and swollen, pulse rapid and small, and she was nauseated, presumably from the whisky.

I gave her 10 drops of echafolta (Lloyd's specific tincture of echinacea), at once, and injected a strong solution of permanganate of potassium deep into the foot, about half an inch on each side of the fang marks. I then removed the ligature and applied to the wound, or rather to the fang marks, a compress wet with the permanganate solution.

The echafolta was given every hour for twenty-four hours, and then every three hours for two days more. The constitutional symptoms were mild, but the leg was swollen, sore and painful for three or four days. Her recovery was complete. There was no doubt about the snake being a copperhead, as I saw it myself.

Whether the echafolta or permanganate was responsible for the favorable conditions, your readers may draw their own conclusions.

WM. B. GAMBRILL.

Ellicott City, Md.

SUGGESTIONS ABOUT INFANTS

We all have had, and continue to have, our troubles when the new baby comes. The following suggestions are all simple but may nevertheless aid somebody, somewhere.

1. The newborn child need not nurse until the third or fourth day. He may be placed to the breast and allowed to nurse if he will, but many of them won't. In the meantime, give him a little sweetened warm water occasionally throughout the day.

2. To assist in training the child to nurse, after the third day have the mother clean her hands thoroughly and then press a little milk out of the breasts and rub it over the nipple.

3. After nursing have the mother dust her nipples with bismuth subnitrate.

4. If the milk seems slow in coming and of a poor quality, advise beer or malt extract with meals. [I don't like the beer idea.—Ed.]

5. Don't give the baby paregoric to quiet it, although you will feel like doing so. Use castor oil, infant's anodyne (Vaughn's), or catnip tea—an old-woman's remedy. And another thing: the baby does not have colic every time he cries. Always inspect the foreskin in a boy baby, and if it is too tight and has a pinhole opening, snip the skin and mucous membrane on the dorsum of the penis back to the edge of the glans, insert one fine stitch at end of cut and keep it clean.

6. Also watch the child's breasts, whether male or female. Recently I cured a case of "three months' colic" by using spt. camphor and hot applications on the breasts of a male child. The glands had secreted a milky

substance which had caked and inflamed the breasts until every time they were touched the babe screamed with pain.

7. In hot weather, see that the child does not have more than twelve layers of flannel binders and skirts swathed about him, and advise bathing once daily in warm, soft soda water instead of perfumed-soap water.

8. Don't believe in three months' colic. It's like postum—"there's a reason."

9. Dust the cord with salicylic acid, one part, starch four parts, and it will come off sooner. But don't worry if it stays on a week or eight days—if it is aseptic.

10. Persistent bleeding from the navel usually means hereditary syphilis and usually is fatal. I have tried the following drugs and measures on the cord: Adrenalin, ergot, collodion, caustic, cautery, suturing and firm pressure, and failed, and then stopped it by pouring warm, melted gelatin over the whole stump.

11. Listen to what the old women tell you. Sometimes they will say something worth while—usually not.

12. Don't permit anyone to kiss the baby on the mouth—and use lots of common sense and castor oil.

The following prescription is often very useful in acute bronchitis in children two months of age and over: Sol. pot. citratis, oz. 1; ess. limonis, drs. 3; syrupi scillæ, drs. 4; syr. acidi citrici, ozs. 2; aquæ, q. s., ad. ozs. 4. M. Sig. One-half to one teaspoonful every two hours in a little water.

C. A. BALLARD.

Logansport, Ind.

A DOCTOR'S DAUGHTER IN NEED

We have just received a pitiful letter from the daughter of the late Dr. M. R. Latimer of Orme, Maryland. The Doctor died without means and recently the Doctor's wife passed away, leaving his daughter entirely without means of support. Now, unfortunately, she has been attacked by a cancerous disease of the scalp, rendering it necessary that she should have immediate treatment. She desires to enter a hospital having special facilities for the treatment of

these cases, but lacks even the money to pay her railroad fare to New York where she wishes to go. She has appealed to us.

Among us, Dr. Abbott and his staff, we have already contributed something to help the dear lady in this time of need. It has occurred to us that there must be among the readers of *CLINICAL MEDICINE* hundreds who would be only too glad to help a little. Contributions of small amounts, twenty-five cents to one dollar each, if sent to us will be forwarded to Miss Latimer. They may be the means of saving her life—at the very least, they will contribute to the comfort of one who was dear to one of the "family." Send in your contributions and we shall see that they reach Miss Latimer.

A MIRACLE—"CASTING OUT DEVILS"

A German woman, married, age 52, mother of seven or eight children, had been confined to bed twenty-eight weeks when first seen by the writer. There was a history of repeated attacks of fever. When seen by the writer the temperature was 99° F. There was a dark, heavily coated tongue, with red edges; the bowels were tympanitic and only moved after using an enema, which had been depended upon for this purpose for the preceding six months. Pulse 105, weak. Numbness and coldness in the left leg and arm.

Two other physicians who had abandoned the case pronounced it a slight stroke of paralysis. There was no appetite, and the woman was unable to retain anything upon the stomach except occasionally crackers softened in water. Sweating was profuse; but all the doors and windows were closed tightly; a fire was in the stove and heavy blankets on the bed, even on the warmest days. The patient was highly neurasthenic and the symptoms related by her would fill a book.

Diagnosis: Chronic malaria.

After ten days' treatment, using hepatics, cactin and the triple arsenates with nuclein; buttermilk and liquid peptonoids for nourishment; massage to bowels and along the spinal column each day, the tongue cleaned off

nically and the other symptoms disappeared. There was no fever; the appetite rapidly returned, patient was hungry and clamored for something solid to eat.

The next day I found her with fever, tongue coated, no desire to eat, feeling much worse. She had eaten potatoes and fish.

I repeated my former treatment, followed up closely day after day for about two weeks. Finally the tongue began to clean off, but

began to learn of hysterolepileptic seizures which she had had before I began treating her, during which seizures she would jerk all over, choke and scream.

Finally the heart began to fail: there was pronounced tachycardia and sinking spells; she was better one day, worse the next. Finally it looked as though the patient's end was approaching, and I so informed the family.

A sinking spell came on and she refused to take the medicine. I found her in collapse and persuaded her to take sufficient to revive her and reduce the pulse from 130 to 100 beats. The minister and neighbors gathered in to witness the passing over.

I left instructions to give three 1-67 grain cactin and two 1-67 grain strychnine arsenate granules every four hours, saying she might not live through the night, and yet she might rally, I could not tell; but that if she was able and willing to take the medicine the following day to let me know and I would return.

They did not let me hear from her, however. On the second or third day after my final visit I learned they had expected her to die at any time, that she had refused to take the medicine that I had left, but was still taking the liquid peptonoids and milk.

The next time I heard from her was about four or five days after my last visit. I learned that she was up and had been visiting the neighbors. I interviewed one of the neighbors and he gave me the details of the miraculous recovery and the casting out of the "evil spirit," as follows:

The minister and neighbors prayed, "with laying on of hands." After the prayer she gave one scream and said, "I feel better." They told her to get up and walk. She got up and walked across the room, which, however, she was able to do two weeks before, and the next day she was placed in a vehicle and taken visiting.

Imagine my surprise after laboring diligently with this case, hoping to make a reputation, and after hopelessly abandoning it, to learn that the "evil spirit" was driven away by prayer and the laying on of hands, while your humble servant received no credit whatever.



Dr. W. W. Cox and wife of Harrold, Texas

the patient was slow in gaining strength. Heart had slowed down to 90, but the temperature persisted, ranging from 99° to 99.5° F. Pain all gone, but not much improvement.

Finally the family and neighbors became discouraged, lost hope of recovery, and suggested that "there is something back of it all which we cannot explain."

I said, "Do you mean something preying upon her mind?"

"Yes," said they, "something we cannot explain."

Being Mennonites in religious belief, I suspected the family and neighbors thought her possessed of devils or evil spirits. I now

I have learned this lesson: Hereafter in such cases I will never give up nor leave a patient until the last breath is drawn; and if necessary, I will do a little "laying on of hands" and "casting out of devils" myself. Had I staid with the patient until the crisis came and passed, until the fever was ended, I might possibly have received the credit.

The outcome convinces me of the correctness of my diagnosis. I tried to explain that fever ended and the turn came just in time, but to no avail. The reply was: "We should not take too much honor from the Lord."

W. W. Cox.

Harrold, Tex.

CALOMEL AS A GERMICIDE IN DIPHTHERIA

Several years ago Dr. DeWitt contributed a very modest article to *American Medicine* on the treatment of diphtheria. Briefly, his treatment consists in minute doses of calomel together with tincture of iron chloride.

Dr. DeWitt was practising in a suburb of Trenton, N. J. Diphtheria is endemic among the foreign population of Trenton, and breaks into frequent epidemics which overrun more or less of the surrounding territory. An epidemic of diphtheria has long ceased to be "news" in this part of the state. In his thirty years of practice here, the doctor has not lost a single case of diphtheria where the patient got the medicine. I think that is a record that should command the attention of the profession.

A remarkable thing is that, no matter how severe the infection, the patient is convalescent within forty-eight hours from the time of commencing treatment. Cultures made for the doctor, from scrapings from the throats of some of his patients, by a Trenton pathologist, have been found free from Klebs-Loeffler bacilli after as little as six hours of treatment. (A milligram of calomel is given every fifteen minutes).

This is significant of the mode of action of the remedies employed. The calomel is germicidal rather than antitoxic. This is borne out by the fact that, while patients cured by antitoxin have been known to

transmit the disease to other members of their families, after their return home from hospital, this has never happened after treatment with the above remedies. This is the more remarkable in that Dr. DeWitt uses no throat spray of any kind nor antitoxin, considering that they add nothing of value to his treatment.

The doctor believes that the active element in his treatment is chlorine, and that the two medicines he uses are the best means of introducing this element into the system. After a study of some of the doctor's cases, it seemed probable to me that the active element was not chlorine, but mercury, and, in short, I succeeded in duplicating his results with calomel alone.

If calomel is pushed to a laxative effect, its germicidal action is lost. Dr. DeWitt and I have both found this to be invariably the case. I found that, without the astringent iron chloride, milligram (1-67 grain) doses of calomel always became cathartic sooner or later, and permitted a relapse. So I gradually reduced the dose till I reached 1-200 grain. This I found I could use freely without any cathartic effect. The germicidal effect seemed to be just as strong with the reduced dose. I have also had good results from the homeopathic *mercurius dulc.*, 3x (gr. 1-1000), but this is comparatively slow and feeble and I prefer to use 1-200 grain. The smaller dose should be given every five minutes, the larger usually every fifteen, to effect.

Dr. DeWitt has found his diphtheria treatment equally effective in membranous croup, scarlatina and erysipelas. In all these it is prophylactic in smaller or less frequent dosage. I have found calomel, gr. 1-200, abortive, curative and prophylactic in Philippine dengue. This disease is of a milder type in the Philippines than elsewhere. Dr. DeWitt tried his treatment in one case of measles, very late in the course of the disease, found it of no value and did not try it again. I tried calomel, gr. 1-200, in one case of measles when the rash was just coming out, and the case recovered so quickly as to throw doubt on the diagnosis. I can only say that there was an epidemic of measles

at the time, and my patient had all the prodromal symptoms.

In all these diseases the patient is convalescent within forty-eight hours after beginning treatment. This time element seems so characteristic of the germicidal action of calomel, that if a patient should show no improvement under it for twenty-four hours, I should abandon the drug and revise my diagnosis.

We have tried calomel, and found it wanting, in pertussis and other infectious diseases. However, it may yet find a place as a germicide in such diseases as pertussis and meningitis, in combination with antispasmodics and other antitoxic drugs.

Such are the clinical facts. How does it work? To my mind, it is unthinkable that such small doses could convert the blood into an antiseptic solution, in the laboratory sense. It will not do it *in vitro*, and it will not do it in life, if given in physiologic doses. Possibly it acts as an opsonin or opsoninogen for an as yet undefined class of bacteria.

Finally, I hope nothing in the above will be construed into an attack on the clean-out principle, which I thoroughly believe in and practise, nor on the use of calomel for clean-out purposes, which I also practise. But I think the attention of the profession should be called to the fact that calomel is a highly valuable cleaner up, in some cases, as well as a cleaner out.

CHARLES F. MORRISON.

Klamath Agency, Oreg.

[In acknowledging the receipt of Dr. Morrison's article, we suggested to him the danger of advising calomel as in any sense a substitute for the antitoxin treatment of diphtheria. The value of the latter, its specific action upon the disease, has passed out of the realm of the speculative and is now accepted as settled by practically the entire medical world. Once the diagnosis of diphtheria is made, it is plainly the duty of the physician to give antitoxin. This, of course, does not mean that he should not give anything else, and it seems to us just as plainly a duty to use any other remedy that may seem indicated, such for instance as calcium

sulphide, calx iodata, or possibly the small doses of calomel advised by Dr. DeWitt. But in replying to our letter, Dr. Morrison wrote the following extremely interesting letter:

"My article on 'Calomel as a Germicide' is largely a review of Dr. DeWitt's work, but I do not wish to be understood as endorsing his views *in toto*. I do not 'advise calomel to replace diphtheria antitoxin,' as I do not consider it has any antitoxic properties whatever. It is merely a germicide. I should think the ideal treatment of diphtheria would combine a systemic germicide (calomel), an antitoxin, and a local antiseptic and solvent. Diphtheria is essentially an intoxication and cannot be cured except by antidoting or eliminating the toxin. Calomel cures by (indirectly) stopping the generation of toxin and giving the system a chance to get rid of what is already there.

"You will note that while the bacilli disappeared from Dr. DeWitt's cases in six hours, clinical convalescence took place in forty-eight hours. Thus it took unaided nature forty-two hours to overcome the toxin present after all new toxin formation had been stopped. It logically follows that

"1. The usual initial dose of antitoxin would have greatly shortened the disease.

"2. Much less antitoxin will be needed when calomel is given in germicidal doses. Possibly the initial dose will be enough.

"3. The exhibition of suitable eliminants, in addition to the above, should shorten the course of the disease still more.

"I have not tried it, as my cases have been few, and I wanted to give the calomel a thorough test.

"While I am on this subject, I will add that, in my experience, the best heart sustainer and vital incitant is the cold wet-pack. I have cured diphtheria with this alone, and without medication of any kind. I did not say all this in my former letter, because that was on calomel and not on diphtheria.

"Our armamentarium has been increased by such valuable agents that diphtheria should now be cured more quickly and easier than a common cold. We have:

"1. Calomel, the germicide.

"2. Antitoxin, and lobelin, the vegetable antitoxin.

"3. Veratrine and other eliminants.

"4. The cold wet-pack vital incitant.

"A curative local treatment has not yet been found.

"Of the above, No. 3 is subsidiary. The other three or four are each curative alone and unaided in the great majority of cases. The first failure of calomel has yet to be reported. If these three treatments were combined they would still act independently, attacking the disease from different sides, and should make short work of it."

We are glad that we have been able to draw out Dr. Morrison further. While his article was confined to a discussion of calomel in the treatment of diphtheria, as he says, it is impossible to avoid reference to other drugs and other methods without creating misunderstandings. It would be a misfortune for any reader to get the impression that he could safely give up the use of diphtheria antitoxin, and that he could get equally good results from the use of mercury alone. We do not believe this to be true—and yet we *do* believe that the calomel treatment is good and worthy of use in association with antitoxin.

The use of mercury for its systemic effect in diphtheria is not new. Our older readers who are familiar with the magazine literature of thirty to fifty years ago will remember the numerous articles appearing at that time upon the application of corrosive sublimate and calomel. They were given in large doses and small, and the reports, though variable, were generally good; yet the remedy certainly never attained the dignity of a specific. Nevertheless, it was and is an effective remedy, possibly one of the best that we have, and in calling it again to our attention Dr. Morrison is doing us all a service.

I can not close this note without again calling attention to the value of calx sulphurata. So much has been said about it in these pages that no "argument" is necessary. Frankly, it is a favorite of ours. We have proven its value in many a hard-fought battle with disease. It is an exceedingly

efficient remedy in diphtheria and in practically all of the contagious diseases—and it is absolutely harmless.—ED.]

CALCIUM SULPHIDE AS AN IMMUNIZING AGENT AGAINST SCARLATINA

On April 18, 1910, I was called to attend Neville L., age eleven years, ill with scarlatina. The family consisted of the mother (who had a history of a previous attack), the sick boy and a younger boy of eight, named Robert. Neville had a typical but not severe attack of scarlet-fever and recovered, with no complications.

The house consisted of only two rooms, and as Robert had already been thoroughly exposed and could not be further isolated, I determined to try the effect of calcium sulphide as an immunizing agent upon him. Accordingly, I gave him two 1-6 grain granules every two hours for the five weeks that he was in quarantine. He also used a gargle of salicylate of sodium, five grains to the ounce of water, four to six times daily, until Neville's convalescence.

Either the use of these precautions or the possession of natural immunity prevented Robert from acquiring the disease from his brother, but if it was natural immunity it was rather short-lived, as on August 18 I was called to see him and found him, after a sleepless night, with a history of a severe congestive chill late in the previous afternoon followed by an access of fever, vomiting and sore throat. He was thickly broken out with the typical scarlatinal rash. He was promptly placed on the treatment which had been accorded to his brother, as follows: Calomel, 1-4 grain, podophyllin, 1-8 grain, six doses of each; one dose to be taken every half-hour until the granules were gone and to be followed by an effervescent saline laxative, which last was repeated every morning until convalescence.

He was given the solution of sodium salicylate, 5 grains to the ounce as a gargle, and was bathed with a solution of epsom salt, one ounce to a pint of water, with 20 drops of tricresol added. These baths were to be repeated every four hours. He was

also given the defervescent compound of aconitine, digitalin and veratrine, until temperature fell to normal and remained so.

This was on the morning of the 20th. By the morning of the 21st the eruption had faded, his throat was clear, though still red, and he was convalescent. Today (August 24) he is eating light food, sleeping well, temperature normal since the 21st, and his throat is well, though desquamation has not yet commenced. Barring possible complications to him, he will do well. But the point a tissue is, did the use of the calcium sulphide last April confer immunity upon him for that time of exposure? To my mind it did and I shall certainly try this method again if occasion arise.

WM. C. POST.

Maquoketa, Ia.

COLON-TUBE AND COLON FLUSHING

In the August number of CLINICAL MEDICINE, page 884, the question as to whether it is possible to carry the colon-tube beyond the sigmoid flexure is discussed.

It is now some fifteen years since I treated a patient, age seventy-seven years, who was suffering from some obstruction of the ileocecal valve, which I diagnosed as a cancerous tumor of the pelvis. During the six months prior to her death obstruction frequently became so complete that the patient would vomit fecal matter. To overcome this I resorted to a method which I had once or twice employed in somewhat similar cases. This consisted in securing a good soft-rubber rectal tube *one yard* long. This I easily introduced, *its full length*, thus landing the furthest extremity at or near the seat of the obstruction. With a syringe I then pumped into the tube, and thus into the bowel, a pint of ordinary kerosene. This was resorted to every time obstruction occurred, probably ten or a dozen times, and always with complete success. The bowels would move and quick relief came.

The files of this journal will show that I reported this case ten years or more ago when the question as to the safety of the injection of coal-oil into the bowel was being discussed.

I will say that I have used injections of coal-oil into the bowels in quantities of a pint or more, in three or four cases, with beneficial results and without harm to the patient. While inserting the tube into the bowel I kept it well filled with warm water by use of a fountain syringe. This stiffened the tube and made way for its passage, by injecting water into the bowel.

V. E. LAWRENCE.

Ottawa, Kan.

[Senn doubted the possibility of inserting a tube beyond the sigmoid flexure; but I am confident I have done this many times by employing the technic described by Lawrence. I have yet to hear of any harm resulting from the enemas of kerosene oil.—ED.]

ANOTHER CASE OF PRECOCIOUS MOTHERHOOD

As early puberty and young motherhood have aroused interest among the profession on account of the most extraordinary case in Chicago, I will state that on July 31, 1910, at 2 o'clock a. m. I was summoned by 'phone to go about eight miles east of this place to a farm on Line Creek to attend Mary Brown, colored, daughter of Jonas Brown, in confinement. She was delivered uneventfully, ere I reached her, of a six-pound baby girl, and apparently was resting well.

Inquiry elicited the following: Age twelve and one-half years; weight 104 pounds, complexion very dark-colored; health always good; had menstruated four times, the first on June 8, 1910. She went the full term of gestation. Her father's age is 31 years; mother died during the month of June, 1910, of tuberculosis, at the age of 32 years. The baby was a fully developed child. Duration of labor only about two hours.

A. J. MANN.

Alvaton, Ga.

PURPURA SIMPLEX

A case of purpura simplex lately occurred here in the person of a fair-haired scrofulous

young woman and I send you herewith a photograph which I took of the maculation or exanthem. The noteworthy feature of the case is the repeated relapses which she has suffered. They came at first about twice a week, later at longer intervals. Each outbreak lasts about thirty to thirty-six hours. Will xanthoxylin or berberine do such a case any good? EDWARD GRAY.

Eldridge, Calif.

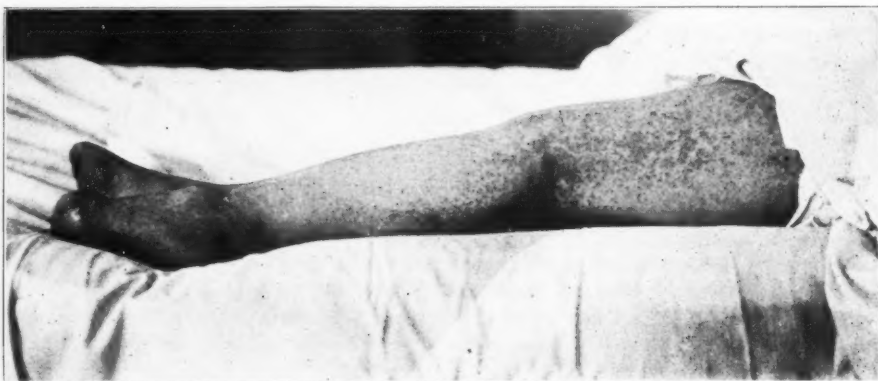
[Possibly berberine might be of value, through its action upon the connective-tissue elements of the weakened blood-vessels, though I believe hydrastine would

while they are young, lead rather than follow. The time is coming when they will have to fall in or fall out. The day of "five cents' worth of this and ten cents' worth of that in a cup of water and take a mouthful several times a day" is gone by. Exactness and known quantities and strength are required.

Long live THE AMERICAN JOURNAL OF CLINICAL MEDICINE and its influence for good. If it never taught anything but how to save the lives of the little ones it would have been worth millions.

J. D. EDMUNDSON.

Oakland, Cal.



Case of purpura simplex, reported by Dr. Edward Gray

be more clearly indicated. I should be inclined to give atropine, my favorite remedy for hemorrhage (such a case is really one of bleeding into the skin) and the calcium salts to correct the hemorrhagic tendency. What say the "family"?—ED.]

GOOD WORDS FOR THE CLINIC

I have read THE CLINIC from its babyhood and have always felt I could not do without it and practise medicine. It is of more benefit to me than any other journal I take.

After twenty-six years of practice in country and town I have given up the work to younger and more active men than myself. But I never fail to "boost" the old CLINIC and tell the boys they would better learn medicine

TYPHOID INTESTINAL PERFORATION

M. Ducourtrial related, to the Société de Médecine Militaire Française, at their session in October, 1909, the following case: The patient, who had an intestinal perforation from typhoid, had been operated upon by him six hours after the first symptoms of perforation. After the laparotomy, the perforation, which was in the neighborhood of the ileocecal valve, was sutured, drainage being performed without washing. The patient was then placed in the semi-sitting position, which is preferred by American surgeons, and was cured.—*Gaz. des Hôpitaux*, 1909, p. 1589.



CLINICAL MEDICINE POST-GRADUATE SCHOOL OF THERAPEUTICS

George F. Butler, A. M., M. D., Director C. E. de M. Sajous, M. D.
Thomas J. Mays, M. D. William F. Waugh, A. M., M. D.
C. S. Nelswanger, M. D. Alfred S. Burdick, A. B., M. D.

PART III.—LESSON THIRTEEN

DYSENTERY

THE ETIOLOGY AND DIAGNOSIS OF DYSENTERY

Dysentery is a purely clinical term, being applied to a somewhat characteristic symptom-complex consisting of intestinal pain and accompanied by frequent hemorrhagic mucous discharges from the bowels. Several varieties of dysentery are at present distinguished, according to their respective causes; they divide themselves, however, into two general classes, viz.: bacterial and amebic.

1. Acute Epidemic Dysentery, the bacterial form, is most commonly found in temperate and subtropical climates.

Shiga, of Japan, isolated an organism which he found to be the cause of an epidemic of this disease in his country. This organism, the *Shiga bacillus*, belongs to the typhoid and colon group of bacteria, very closely related organisms, showing, in fact, only very slight cultural differences and causing the same variety of symptoms. They have also been described by Flexner, who found them during an epidemic of dysentery at Manila; by Parke, who found them during an epidemic of dysentery in the East; and also by Bassett. Duval and Bassett (*American Medicine*, 1902, Vol. 4, page 417) found the Shiga or closely allied

dysentery bacilli in forty-two out of fifty-three cases of summer diarrhea in infants.

A careful review of the bacteriological literature shows that most cases of summer diarrhea of infants, characterized by the appearance of mucus in the stools, are caused by this class of bacilli.

All forms of dysentery belong to the classes of diseases known as filth diseases and can practically all be prevented by proper sanitary measures.

In the bacillary form of dysentery we have a characteristic inflammation, sometimes ulceration or lesions of a diphtheritic nature (ulcerative colitis) of the intestinal mucous membrane. Other than this there are no characteristic anatomical lesions.

The bacilli are found in enormous numbers in the feces and also, as a rule, in the mesenteric glands. Unlike in typhoid fever, the bacilli are not present in the skin, the blood or the urine. The infection resembles that of Asiatic cholera very much. The bacilli are spread by flies, by contact, by water, raw vegetables and by milk.

2. Amebic Dysentery, the other form, is more common in the tropics. It was first observed by Lambal, in 1869, that the stools of sufferers from this disease contained ameba.

The amebic variety of dysentery is exceedingly common in Egypt, India, China and the Philippine Islands. It is also occasionally encountered in South America and the Southern States of our own country. Although it is a decidedly chronic disease, many times lasting for years, the majority of the attacks occur after the heavy rains of the early summer months.

The Cause of this Disease is the *entamoeba histolytica*, and these organisms are found in the intestine, especially in the ulcerated patches, but also in the abdominal cavity and in the liver abscesses, if formed, which is the case in from 20 to 25 percent of all attacks. This organism is pathogenic for cats, dogs, and monkeys, the latter sometimes acquiring the disease in a natural way.

The stools in this condition are always thin and watery, and though often foul-smelling usually possess a lime-like odor. They contain much mucus, blood and pus, numerous pieces of necrotic tissue and are always alkaline in reaction.

The histolytic amebas are very easily destroyed in the feces by a saturated solution of boric acid and 1 : 300 solution of quinine sulphate, which kills in ten minutes; also by hydrogen peroxide and potassium permanganate.

The infection is spread by drinking water and raw foods, many of these parasites being found upon the green vegetables, especially those fertilized with human excretion.

Unfortunately, sand filtration, which is so effective in the prevention of typhoid fever, and of bacillary dysentery, is of no avail here, since the amebas pass through even the best sand filters. In an infected district the only possible safeguard is to boil the water or to treat it chemically, to destroy the organisms.

Diagnosis is usually made by an examination of a perfectly fresh stool, by means of a hanging drop, usually examining under low magnification. Thus we find in the bloody mucous or necrotic tissues highly refractile motile bodies, ovoid or irregular in shape, the cells being granular, especially the inner portion, or endosarc, which contains a nucleus and foreign substances, such as red

and white blood-corpuscles, pigment, food particles, bacteria, etc. There is also a clear and very highly characteristic ectosarc, which is best shown in the false feet, or pseudopodia. Usually there are present from two to four vacuoles which may be seen to pulsate. The organism reproduces by fission and budding.

Unless the feces be examined immediately after evacuation the organism will be found in an ovoid resting stage, in which little or no motility is evident, and they then resemble epithelioid cells, although errors in diagnosis most commonly are due to mistaking the epithelioid cells for amebæ. They stain well with methylene-blue or with dilute fuchsin solution.

During certain periods in the course of the disease the patient may exhibit either normal bowel movements or, quite often, constipation, but after a brisk cathartic the amebæ may be found in the resultant stool.

In tropical countries dysentery is probably the most fatal of the prevalent diseases, and among the United States troops in the Philippines it is the principal cause of death. During our own Civil War over 50 percent more deaths were due to dysentery and diarrhea than to the casualties and from wounds. The death-rate among the United States soldiers in the Philippines is 2.02 per 1000.

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MANAGEMENT OF DYSENTERY

Experience has confirmed what reason teaches, that one kind of treatment does not answer in all forms of dysentery, nor will one drug suit all stages of the disease. Undoubtedly *more than one morbid state is included* under the name of dysentery, and the treatment adapted to one form may not be useful in another. The physician, therefore, should not allow any prejudice to prevent him from having resort to remedies which have been found life-saving in certain forms of the malady.

Hygienic and Dietetic Regimen Paramount.—The chief point, however, in all

forms of dysentery alike is the hygienic and dietetic treatment, and many of the milder cases yield to this alone.

Rest, in this disease, is an important curative agent. The patient should be put to bed at once. The room, for obvious reasons, should be well aired and protected from draught. Great attention should be paid to individual hygiene, and I might add, in cases of epidemic, to public hygiene as well; and it is during epidemics that the disinfection and proper disposal of the excreta and the securing of pure drinking water must receive the closest attention. All drinking water should be absolutely pure, preferably filtered and boiled, even if the source from which it is derived is above suspicion.

The patient should be kept in bed and his strength be husbanded from the beginning. The bedpan should be insisted upon, and after each evacuation the anal region should be washed with an antiseptic solution and then carbolized vaseline applied. Except in very warm weather, a thin woolen covering is useful in preventing chilling of the surface.

Heat a Valuable Agent.—Hot fomentations to the abdomen may give the patient a feeling of comfort and aid in relieving pain. Care must be taken in the act of changing the fomentations, that the patient be not exposed to cold and the bed clothes are protected from dampness. If there be considerable gastric irritation, a sinapism or a spice poultice may be placed over the abdomen. Sometimes, especially in tropical countries, where the patient is suffering from fever and drenched in perspiration, the fomentations seem to add to his suffering; in such cases they may be withheld. A warm bath given with due precautions at the very beginning of the disease often is useful.

In Selecting a Plan of Treatment, it must be remembered that an extensive surface of the intestines is involved; that the inflammation is intense and rapidly progressing, with a tendency to necrosis and putrefaction of the necrosed tissue in the intestinal canal; that the patient is soon exhausted, if the inflammation does not abate; and that there is great risk of the absorption of toxins. Underlying all these

conditions in a certain proportion of cases is the undoubted presence in the intestines of the *amœba coli* as a cause, and the probable presence of other microorganisms as causative agents in all other cases.

The Diet.—A very important point in this disease, in which the food-canal itself is so seriously affected, is the diet.

Milk.—In most instances the patient should be restricted to a milk diet, pure and simple, and it is very essential that the milk be absolutely pure. Condensed milk will answer if perfectly pure fresh milk cannot be obtained. Milk diet is as advantageous in the chronic as in the acute stage and is especially valuable when there is a scorbutic tendency. The milk may be given pure or diluted with lime water and is to be administered in the intervals between the doses of medicine. For the first few days, unless the patient be in a low state, he should not be urged to take nourishment oftener or more largely than he desires, while in all cases the needs and feelings of the individual should receive due consideration. When pure milk is not well supported, it should be given with full doses of pepsin, or peptonized milk may be substituted.

It must be remembered that in this disease perfect digestion and absorption are difficult. Whatever food is given should be given in small quantities at short intervals and of a kind that has the least waste.

Milk, if given in large quantities, is one of the most objectionable of all foods, as imperfect digestion and fermentative decomposition follow its use. The presence of masses of casein in the stools is, to a certain extent, a guide to the advisability of discontinuing milk, or for diluting the same with lime water, barley water, rice water or vichy water. The withdrawal of milk altogether and the giving of beef juice, beef tea or broths is sometimes followed by relief of the abdominal distress and by a change in the character of the stools. Whey may be given as a drink if the patient is thirsty. When prostration is great—not otherwise—a little wine or brandy may be beneficial.

As regards the quantity of food, not more than from two to four ounces of liquid

food should be given at intervals of two or three hours. In the earlier stage, with the hope of moderating the severity of the attack, a minimum quantity should be given. Later on, if the pulse is feeble and the patient exhausted, the quantity may be increased; but it must be remembered that the asthenic symptoms are not due to want of food, but to inflammation and toxemia. Strength is lessened and not increased by loading the intestines with decomposing food.

Medical Treatment.—For many years ipecacuanha has held a high place in the estimation of clinicians in the treatment of dysentery. This drug still retains its place in the books and in the practice of numerous physicians, although it is fair to say that the average American practitioner does not prescribe ipecac as much as the European doctor.

Uses of Ipecac.—Personally, my experience justifies me in agreeing with Davidson, that in most uncomplicated cases of *tropical dysentery* the ipecacuanha treatment should be adopted, and I believe that this treatment is also the *best for the catarrhal stage of dysentery in temperate climates*. It seldom fails if given from the onset of the malady.

Davidson says that when the disease has been preceded by constipation, a preliminary dose of calomel and saline laxatives should be given to carry off fecal accumulations. If, on the other hand, there is no reason to suspect such retention, 20 to 30 grains of ipecacuanha powder, made into a bolus, should be given at once, and the dose repeated every six, eight or twelve hours, according to the urgency of the symptoms and the tolerance of the remedy, until a feculent motion is obtained.

If the first dose causes vomiting, this will do good rather than harm, but the second dose should be preceded by a sinapism placed over the pit of the stomach and 20 to 30 drops of tincture of opium for an adult patient should be given half an hour before the second dose and no liquid allowed for two hours before the bolus is administered. With these precautions, the second dose is seldom ejected.

It is better, as a rule, to rely upon the ipecacuanha alone; still, in some instances,

when the tormina are very distressing and the calls to stool excessively frequent, from 10 to 15 minims of laudanum may be advantageously added to each bolus. The intervals between the doses should be sedulously utilized for the administration of nourishment. The first sign of improvement is the passage of a feculent stool, after which the tormina and tenesmus decrease.

Additional Medication.—The treatment as directed should be maintained for some time after signs of amendment have appeared, but when the disease has assumed the character of a *simple diarrhea*, bismuth salicylate, alone or combined with Dover's powder, usually proves sufficient to check the looseness, if careful attention to diet be continued.

When there is much *dysuria*, a hypodermic injection of morphine may be resorted to. However, in this complication a warm bath often acts beneficially and if not otherwise contraindicated should be tried.

The treatment by large doses of ipecacuanha has proved so successful that it should not on light grounds be set aside in favor of any other. If for any reason this drug should be inadmissible, the saline treatment, so much and so successfully used in France, may be resorted to.

Importance of Laxative Salines.—Sodium sulphate (or any other good saline laxative—I myself giving preference to Abbott's effervescent salt) is the salt generally employed and is given in solution in doses of an ounce to an ounce and a quarter first thing in the morning. Its purgative action commences from one to four hours after ingestion and commonly ceases in ten or twelve hours. The dose should then be repeated, unless the urgent need for rest requires delay. It was remarked by Trousseau that the cure is the more certain the greater the number of evacuations. Still, there is no use in urging purgation beyond a reasonable limit, and half an ounce of the salt four times daily generally will suffice in mild cases.

The Antiseptic Regimen.—The constant presence in the stools of organisms that undoubtedly exercise a destructive influence upon the tissues of the intestines and by means

of the poisonous material they generate frequently cause disease of the liver and occasionally of the kidneys suggests to us a resort to antiseptic remedies by the mouth or the rectum in all cases of dysentery as auxiliary to the ipecacuanha treatment.

Experience, so far as it goes, is in favor of attempting to produce antisepsis of the intestinal canal by the administration of antiseptic remedies by the mouth, and as these need not interfere with the treatment either with ipecac or salines, there is no reason why so hopeful a method should not be tried. The *sulphocarbolates* are the remedies to be preferred whenever there is a suspicion of liver or kidney complication. Ipecac and the laxative salines act as intestinal evacuants. They clear out, or wash out so to speak, the intestinal canal, helping to remove at the same time the microbes and toxins which may be present.

However, when the rectal extremity of the bowel is the sole or chief seat of the disease, the employment of enemas, especially mild, nonirritating antiseptic injections, responds to the indications.

Some Objections to Enemas.—In *fecal dysentery*, on the other hand, we cannot carry out disinfection by enemas with safety. In fact enemas are not as useful in practice as one might suppose. When the disease has reached the stage of suppuration, ulceration or gangrene, when antiseptics are mostly required, the bowel is so disorganized and pliable that the use of large enemas is not devoid of danger, while small ones fail to cover the entire diseased area. Frequently also the anus and rectum are intolerant of the introduction of the clyster-pipe. It is in the earlier stage, before the integrity of the bowel has been seriously impaired, that good is to be expected from large enemas.

Enemas Have Their Uses.—The colon of an adult has a capacity of three to four pints. A large enema may be taken to mean from one and a half to two and a half pints. A large water enema often is useful at the beginning of the attack, and it may be made antiseptic in some measure by the addition of appropriate agents. If it be repeated, small doses of the antiseptic should

be added at first and the increase of the active ingredients regulated by the observed effect and the susceptibility of the individual patient.

Our experience with antiseptics in dysentery, especially in the way of enemas in the various stages, is rather slight, but given both by mouth and rectum they furnish resources which may hereafter enable us not only to treat cases successfully, which otherwise resist other forms of medication, but may materially diminish the risk of hepatic complications and reduce the number of cases that become chronic.

Medicated Clysters.—Small injections of starch water and laudanum have a limited field of employment in the treatment of dysentery. But, says Johnson, they do infinite harm if used without emptying and cleansing the rectum in advance, and he adds, that they are to be condemned if administered for the purpose of curing the dysentery by preventing the emptying of the rectum.

Solution of silver nitrate, containing 1-2 to 1 grain to the fluid ounce together with from 5 to 10 drops of deodorized tincture of opium, not more than one or two ounces of this being used at the time, is recommended by Pepper, and is of service in cases in which the inflammation is confined to the lower bowel and is not of intense degree. Stronger solutions act favorably if the rectum is ulcerated, but they are better adapted to the chronic forms of the disease. Small injections of astringents or of ice-water and the insertion of small lumps of ice have also been suggested.

The object of large injections containing astringents or antiseptics is to apply treatment to the colon throughout its whole length by bringing the drugs in solution in direct contact with the inflamed surface, besides the cleansing and disinfecting of the canal. The first question is as to how this should be done.

Technic of High Injections.—If the fluid is to be thrown into the rectum or an effort is made to pass the tube through the curves of the sigmoid flexure into the colon, it is a fact that, in spite of what may have been said on this point, the efforts to pass the tube beyond the first turn of the

sigmoid will usually prove fruitless, for the tube will, as a rule, turn on itself. Even if success were more frequent, there would be the serious objection that mechanical irritation of the mucous membrane is inevitable and injury or rupture of the wall of the bowel, thinned as it is by ulceration, is possible.

However, fluid thrown into the rectum will reach the colon just the same, as Johnson says that he has had the opportunity to demonstrate the facility with which this takes place. In the case of a fecal fistula in the cecum, following the operation for appendicitis, colored fluid was forced into the rectum with a Davidson syringe and this, under gentle pressure, escaped within half a minute through the fistulous opening in the right iliac region. This was repeated so often and with such uniform results that it leaves no doubt that nothing can be gained by making the tube pass through the sigmoid into the colon.

Astringent and Antiseptic Enemas.—

Alum, lead acetate, zinc sulphate and other mineral astringents have been employed in rectal injections in the proportion of half a dram or a dram to a pint of water, warm or cold. Silver nitrate is perhaps more highly spoken of than any other drug of this class and is to be used in the same strength. Tannic acid has an especial advantage in being antiseptic and astringent while free from irritating properties.

The objection to be made to all astringents used in this way is, that they can do nothing more than cause contraction of superficial vessels and can have no effect upon the parasitic element of the disease nor upon the proceeding disintegration of tissues and the decompositions that are going on in the intestinal canal. They cannot, therefore, equal the antiseptics capable of destroying the cause of the disease and of preventing intestinal putrefaction.

Solutions of any of the antiseptics should be introduced into the colon by rectal irrigation, but as they are so much more serviceable when used in the form of irrigations, they will be considered under that head. Large volumes of water should always be introduced into the colon under low

pressure. The inflamed state of the walls of the bowel should be borne in mind. Overdistention cannot but do harm, while slow entrance will result in the distribution of the fluid throughout the colon without stretching the bowel.

For the purpose of irrigation a fountain-syringe or a Davidson syringe will be needed, or water may be poured into a funnel attached to a long tube. This tube should be at least from twenty-four to thirty-six inches in length and No. 27 English or No. 41 French in size, smaller tubes, of course, being used for children and in cases in which the rectum is intolerant of distention. It is very important that the orifices of the tube should be large and located on the side. Tubes with an opening only at the extremity are worse than useless here. After the water has been thrown into the bowel it is allowed to remain for a few minutes or until the patient ejects it spontaneously.

Koryton has reported sixteen cases of dysentery thus treated by irrigations with excellent results. He employed warm water, plain or carbolyzed, and the fluid was allowed to remain in the intestines five, ten, fifteen or even twenty minutes. Under this treatment the feces became thicker and lost their foul odor, the mucus, blood and shreds of waste tissue disappeared, the fever subsided, and the general symptoms all improved. The benefit followed immediately upon the washing of the bowel, and relapses due to suspension of the measure were relieved at once by a return to the treatment.

One Objection to this plan is that there is a certain amount of danger from overdistention of the bowel. The patient's suffering may be increased thereby and the disease aggravated. Again, the fluid injected may not be expelled or only a small part of it escape, so that there is no washing out of the bowel or a thorough disinfection of its contents.

Irrigation of the Intestines.—The difference between injection and irrigation is, that the latter aims to clear the bowel of its decomposing contents so far as this may be done; to make it clean and to keep it so; to treat it, therefore, as an external wound

would be treated according to antiseptic methods.

The patient lying on his left side or back and close to the edge of the bed, two soft-rubber tubes are passed into the rectum, side by side, as far as they can be introduced without difficulty, which is about eight inches. A No. 17 English (No. 29 French) tube is employed for carrying the fluid into the bowel, and one of two sizes larger for its escape. After attaching the syringe to the smaller tube, the fluid is gently forced into the bowel, and then by slightly moving the tubes up and down, the injected fluid will begin to return through the outlet, thus an in and an out current being soon established.

It may be objected that in this way the rectum alone is washed, but it will be found upon trial that it requires five minutes of washing before the escaping fluid becomes clear, while threads of mucus, blood clots and opaque fluid will continue to flow long after the rectum itself has been emptied; also, that for a time more water enters than escapes. Evidently a current is established in the colon and its contents are gradually washed out. That the colon is not completely cleansed is not a legitimate argument against the method; frequent repetitions of the irrigation will gradually make it clean and keep it so.

Instead of two tubes, which often cause distress, one large-size tube (No. 27 English, No. 41 French) may be used alone, in which case six or eight ounces of the fluid are introduced and then allowed to escape, this procedure being repeated until two quarts or more have been passed through and the outflowing water is quite clear. In most instances the single large tube is much to be preferred as being less painful to the patient and more thorough in its effect upon the contents of the colon. Special irrigating tubes are obtainable from dealers in surgical instruments.

The Practical Effect of this mode of treatment just described, in every instance, is, first, to lessen the frequency of the stools, next their character changes, the blood and pus diminish, and after two or three days

normal fecal matter may appear in the discharged fluid.

A cardinal point upon which I have insisted is, that in dysentery the rectum is like an overdistended bladder, discharging its overflow, the contracting and irritable sphincter retaining a large residuum of decomposing fluid. If by suppositories or opiates the number of stools is diminished, no good but instead a great deal of harm is done. As the result of repeated irrigations, the frequency of the movements will gradually lessen until the evacuations take place only through the tube at the time of its introduction. This has been demonstrated so often that it may be said to be an invariable rule, and this fact is even more marked in cases of extensive colitis with large, foul-smelling fluid evacuations.

In case the irrigations are followed by much irritability of the rectum or by abdominal pain, a suppository of 1-2 grain of the aqueous extract of opium or of 1-8 to 1-4 grain of morphine may be introduced. In a short time, however, this may be omitted, or resorted to only to quiet nervous irritability or induce sleep, although for this purpose a subcutaneous dose of morphine is better.

The quantity of fluid employed should vary from one to three quarts, according to the intensity of the inflammation and the length of time for the outflowing current to become clear. The procedure should be repeated at intervals of from three to six hours, the shorter interval for the severer cases, the intervals to be gradually lengthened as the patient improves. *Relapses* should be met at once by a return to active treatment.

Choice of Antiseptics.—The harmless antiseptics are to be preferred, hence boric acid, salicylic acid, the sulphocarbolates or naphthol may be employed. The first of these is perhaps the best of all, and the desired result is to be attained rather by the frequency of irrigation than by any peculiar quality of the drug used, and boric acid will be found satisfactory in every way. Solutions of quinine, 1 : 5000 or 1 : 2500, or even 1 : 1000, are spoken of with special favor by Osler. So also solutions of mercuric chloride (1 : 5000 or 1 : 3000) have received the

commendation of many practitioners that they deserve trial in severe cases. Great care, however, must be exercised to secure an immediate and complete evacuation of this corrosive fluid, while frequent irrigations with this chemical involve obvious danger. Diluted solution of hydrogen dioxide can be conveniently used without risk to the patient.

Astringents, as for instance alum, copper sulphate, lead acetate, silver nitrate, have a much more restricted use by injection and irrigation than drugs of the antiseptic class. The former, however, may be substituted for the latter, when the intensity of the symptoms has abated and the discharges have become more diarrheal in character, or when there is a tendency for the disease to pass into the chronic form.

Irrigations with silver nitrate (20 to 30 grains to the pint), are especially useful when the presence of pus in the discharges shows the persistence of unhealed ulcers. If these ulcers are in the rectum (and an examination ought to always be made to see whether this is the case), they may be touched, through a speculum, with strong solutions of silver nitrate or with carbolic acid.

Special Symptoms.—During the progress of cases of dysentery there are many special symptoms that require treatment as they appear. Thus sleeplessness is combated by morphine administered subcutaneously, as already suggested. The failing action of the heart is met with digitalin, strychnine, nitroglycerin, and possibly, in some cases, by alcohol.

When improvement has set in, there is danger of too early extending of the diet, and great caution must be exercised in permitting solid foods.

Now, the foregoing is Johnstone's treatment of dysentery, and in many ways it is very efficient. Simply to irrigate the rectum and the intestinal canal is wise, provided there is not too serious ulceration and degeneration of the intestinal mucous membrane, in which case, as I have remarked before, there may be some danger attending the use of enemas or irrigation. But even though we resort to the washing out of the

intestinal canal, as recommended above, we should not discontinue the intestinal antiseptics internally, for there is no question but that the proper use of the sulphocarbolates will do wonders toward checking the discharges and healing the ulceration of the bowel.

The Use of Suppositories containing astringents, morphine or antiseptic drugs is a favorite method of treating some forms of dysentery.

When the inflammation is confined to the rectum alone, as shown by very small stools containing blood and mucus, suppositories of the aqueous extract of opium or of morphine will relieve the tenesmus and the frequent efforts at stool. There is an advantage in using morphine in this way in conjunction with the preliminary irrigation, but care must be taken to give only the smallest doses that will afford partial relief, and no attempt should be made to arrest the discharges completely. The addition of an astringent to the suppository is invaluable. The effect of cocaine, curiously, is not as favorable as might be expected from its anesthetic influence upon mucous membranes.

Opium (or Morphine) may be found to be necessary in the treatment of some cases of dysentery. There are objections to it, however, as it arrests peristalsis and causes an accumulation in the bowel of matter that should be expelled. It is in cases with large, liquid, putrid stools that opiates do positive harm by arresting the same. But here, too, the irrigation method, by keeping the bowel empty, removes much of the danger from that source, and this procedure should not be neglected.

The indications for opium seem to be chiefly intense abdominal pain, sleeplessness from pain or frequent stools, or an excessive number of stools. Dover's powder, deodorized tincture of opium or morphine hypodermically are the best forms for its administration. For many reasons the latter is to be preferred, the doses being sufficient to subdue great suffering and to keep the nervous system in comparative repose; but any effect approaching narcotism should be

most carefully avoided by giving small doses at first and at safe intervals.

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THE TREATMENT OF DYSENTERY, BACILLARY AND AMEBIC

Dysentery is one of the maladies which modern science compels us to rewrite completely. All the old work on this malady may be set aside, since the discovery that there are two distinct forms dependent upon different causes, running different courses, and amenable to different treatment—renders all of the older theories and deductions obsolete.

Acute Dysentery is generally due to the bacillus of Shiga. This form does not tend to cause ulceration of the intestines or hepatic abscess. It may occur in any part of the country. It is not generally understood, however, that an acute attack of this form of dysentery, even although mild, may leave a chronic infection of the bowel, the individual thus becoming a dysentery carrier, capable of transmitting the disease wherever he goes. I have had under treatment several cases of chronic ill health, resisting all sorts of treatment—medicinal, hygienic, climatic and the so-called physiologic therapeutics in all its forms—until the true cause was discovered, the stools swarming with Shiga's bacilli.

Treatment of Acute Dysentery.—In this form of dysentery an excellent method of treatment is the following:

Empty the bowels by means of calomel, followed by saline laxative; disinfect them with a sufficiency of the sulphocarbolates, employing the sulphocarbolate of zinc, sodium or calcium, as the case may be, or the combination of the three, which is very effective. Whichever is used, it should be pushed to full dosage and this sustained until the bacilli are no longer to be detected in the stools.

Great benefit also follows washing out the large bowel with copious antiseptic enemas, any antiseptic answering. I would suggest the sulphocarbolate of copper, 1 grain to the ounce, copper having proved exceedingly

effective against many microorganisms. The injection should be given once a day, and I believe that, after it has been employed, it is well to wash out the bowels with a saline solution.

Amebic Dysentery is an altogether different disease. While the amebic parasite may occasion acute dysentery, the result is more generally the chronic form, and more likely to be attended with ulceration and to be followed by abscess of the liver.

Quinine has acquired quite a reputation in the treatment of the amebic form of dysentery, given internally and pushed up to full dosage, while at the same time the large bowel is washed out with copious enemas containing as much quinine as can be borne without causing irritation, which is a matter of experiment. It is best that an acid be added, acids being destructive to the ameba, as well as to other pathogenic germs. Probably one grain of quinine to the ounce, with several drops of dilute sulphuric acid, is a good average. It is better to begin with mild strengths and increase them as they are borne. The intestinal antiseptics are also useful here.

Ipecacuanha and Emetine for the Bacillary Form.—It is only in the bacillary form of dysentery that ipecacuanha is of value. This utility has been abundantly proved, not only in India where the treatment originated, but in all parts of the world. The reports from the Philippines are especially favorable. When ipecacuanha itself was employed, one full dram of the powder was given at a dose, with all possible precaution to prevent vomiting.

We can do better now, excluding the more irritant principles of this drug by giving the pure emetine. It is better to delay absorption by enclosing it in a salol-coated capsule or by diluting it with talcum powder. I would suggest that if the pure alkaloid is employed, a milligram is a sufficient dose, and that this may be repeated every hour until nausea indicates the limit of its effective dosage. This procedure may be repeated every day as long as the attack lasts.

The more acute the attack, the more pronounced the beneficial effect of emetine.

Usually its effects are shown by the appearance of bilious, spinach-colored stools, and by a marked moderation of the acute symptoms; the pain and straining cease, the fever subsides, the pulse resumes its volume, the skin moistens, and convalescence, in most favorable cases, is established within a few hours. About eight hours usually elapse after the emetine is given before the bilious stools appear.

The distinction between the two forms of dysentery may be inferred from a study of the symptoms as herein suggested, and confirmed by a bacteriologic examination of the stools. This is not a particularly pleasant work, but the physician who fails to avail himself of precision in diagnosis for such a reason as this has mistaken his profession and would better give up practice and become a salesman in the perfumery department of a drugstore.

Management of Collapse.—Sometimes, especially in the tropics, attacks of dysentery come on suddenly and violently, the patient being prostrated from the first, and collapse quickly supervening. Here the indication is to arouse the resisting powers of the system, and for this purpose the most powerful revulsive should be employed.

The following *formula* has been much used for such cases, as well as for the choleraic attack and for pernicious chill: spirit of camphor, chloroform, oil of cajuput, tincture of capsicum, of each 2 drams; stronger ether, 1 ounce. Dose, 1 teaspoonful, to be taken undiluted, and repeated if necessary in thirty to sixty minutes.

Besides this, hot mustard baths may be employed, and the hypodermic injection of 1-100 grain of atropine. It is not safe to inject strychnine here, even in an average physiologic dose, for instead of relieving the collapse, the symptoms may be intensified. After reaction has been brought about, the ordinary treatment of dysentery may be instituted.

The Danger of Opiates.—Opiates are the most dangerous drugs that can be used in dysentery. In my very young professional life I fell into this mistake and was horrified to see a patient with dysentery die although

all alvine discharges had been completely suppressed by the opiates. I never afterward repeated that mistake. The only benefit to be derived from opiates is to check over-excited peristalsis, but this is better effected by the use of small very hot enemas. It is doubtful whether there is advantage in adding anything to the water here employed, but I have thought that nitrate of silver, 1 grain to 8 ounces, had a good effect. The hotter the solution (within reason) used, the greater will be the relief.

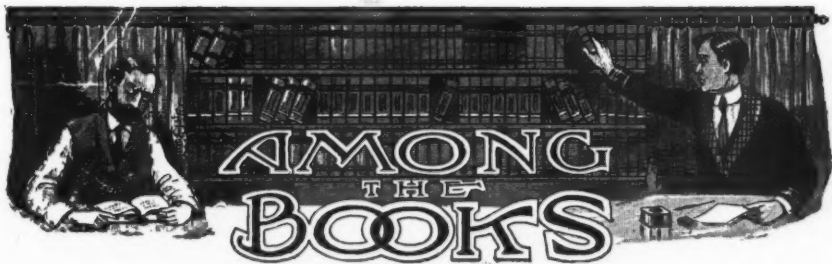
Importance of Microscopic Control.—I am inclined to believe that when the practice of examining the stools becomes more of a routine, many cases will be found of persons who, after *apparent* recovery from dysentery, continue to harbor the infective germs and suffer from more or less ill health, while disseminating these disease-agent wherever they go. But it is not the typhoid bacillus alone which is spread in this manner, for there are dysentery carriers as well as typhoid carriers. These cases further illustrate the practical importance of the system of intestinal antiseptics, and go to vindicate those of us who have steadily adhered to the use of this custom despite the attacks which have been made upon it.

W. F. WAUGH.

Chicago, Ill.

EXAMINATION QUESTIONS

1. Why is "dysentery" called a purely "clinical" term?
2. Describe fully the clinical conditions to which the term is applied by physicians.
3. Differentiate the various clinical pictures presenting themselves, and discuss their etiologic differences.
4. Describe the causes of the several varieties of dysentery and the most prominent anatomical changes observed.
5. How do you distinguish between an attack (incipient and developed) of dysentery and typhoid fever?
6. Define the general characteristics of bacteria and amebae.
7. Outline the treatment, in each of the two general classes of dysentery, as laid down in this lesson.
8. What is your own routine treatment?
9. What are the objections to opiates; and when are they indicated?
10. What is your experience with ipecac, emetin, and quinine?
11. Mention your experience with enemas.



ELLIS' "PSYCHOLOGY OF SEX"

Studies in the Psychology of Sex. By Havelock Ellis. Vol. VI, Sex in Society. Philadelphia: F. A. Davis Company. 1910. Price \$2.00.

Havelock Ellis' "Sex in Society" is a discussion of the varied sociologic phases of sex. The physician is the great sociologic teacher of today, and upon health; in the broad sense, turns a people's moral and mental status. As Richard Baxter of "Saint's Rest" fame put it centuries ago, "since black bile is the bed through which the devil worketh, it is possible by physic to cast him out." Quaintly put, as is this principle here, it underlies most of the needed ethical and other reforms in sociology.

Discussions of social hygiene that are purely medical or purely juridical or purely moral or purely theological, remarks Havelock Ellis in his preface, not only lead to conclusions that are often entirely opposed to each other but they obviously fail to possess complete applicability to the complex human personality. The main task before us must be to ascertain what best expresses, and what best satisfies, the totality of the impulses and ideas of civilized men and women. So that, while we must constantly bear in mind medical, legal and moral demands—which all correspond in some respects to some individual or social need—the main thing is to satisfy the demands of the whole human person.

It is necessary to emphasize this point of view because it would seem that no error is more common among writers on the hygienic and moral problems of sex than the neglect

of the psychological standpoint. They may take, for instance, the side of sexual restraint, or the side of sexual unrestraint, but they fail to realize that so narrow a basis is inadequate for the needs of complex human beings.

From the wider psychological standpoint we recognize that we have to conciliate opposing impulses that are both alike founded on the human psychic organism. A new guiding impulse, reinforcing natural instinct and becoming in time an inseparable accompaniment of it, will lead civilized man on his racial course. Just as in the past the race has, on the whole, been molded by a natural, and in part sexual, selection that was unconscious of itself and ignorant of the ends it made toward, so in the future the race will be molded by deliberate selection, the creative energy of Nature becoming self-conscious in the civilized brain of man.

This is not a faith which has its source in a vague hope. The problems of the individual life are linked on to the fate of the racial life, and again and again we shall find, as we ponder the individual questions we are here concerned with, that at all points they ultimately converge toward this same racial end.

Since, therefore, we have here to follow out the sexual relationships of the individual as they bear on society, it will be convenient at this point to put aside the questions of ancestry and to accept the individual as, with hereditary constitution already determined, he lies in his mother's womb.

It is the mother who is the child's supreme parent. At various points in zoological evolution it has seemed possible that the functions that we now know as those of maternity would be largely and even equally

shared by the male parent. Nature has tried various experiments in this direction, among the fishes, for instance, and even among birds. But reasonable and excellent as these experiments were, and though they were sufficiently sound to secure their perpetuation unto this day, it remains true that it was not along these lines that Man was destined to emerge.

Among all the mammal predecessors of Man the male is an imposing and important figure in the early days of courtship, but after conception has once been secured, the mother plays the chief part in the racial life. The male must be content to forage abroad, and stand on guard, when at home, in the antechamber of the family. When she has once been impregnated, the female animal angrily rejects the caresses she had welcomed so coquettishly before, and even in Man the place of the father at the birth of his child is not a notably dignified or comfortable one. Nature accords the male but a secondary and comparatively humble place in the home, the breeding-place of the race; he may compensate himself, if he will, by seeking adventure and renown in the world outside.

The mother is the child's supreme parent, and during the period from conception to birth the hygiene of the future man can only be effected by influences which work through her.

Fundamental and elementary as is the fact of the predominant position of the mother in relation to the life of the race, incontestable as it is, it must be admitted that it has sometimes been forgotten or ignored.

In the great ages of humanity it has indeed been accepted as a central and sacred fact. In classic Rome, at one period, the house of the pregnant woman was adorned with garlands, and in Athens it was an inviolable sanctuary where even the criminal might find shelter. Even amid the mixed influences of the exuberantly vital times which preceded the outburst of the Renaissance, the ideally beautiful woman, as pictures still show, was the pregnant woman.

But it has not always been so. At the present time, for instance, there can be no

doubt that we are but beginning to emerge from a period during which this fact was often disputed and denied, both in theory and in practice, even by women themselves.

It is a singular illustration of the tendency of forgotten human ideals as well as primitive instincts to reappear during periods of emotional stress, that pregnancy ideals of beauty should crop up not only in Reformation art like that of Kranach, but also in the fashions during the close of the "Red Terror," as Carlyle ("French Revolution") sneeringly points out.

The discussion of prostitution by Ellis is much broader than is usual. He does not, like many blatant "reformers," confuse the "white slave," forced into prostitution by the impossibility of supervision of brothels under existing conditions, with the mass of the prostitutes in whom prostitution is a "confidence" operation taking the lines of least resistance. This great hysteric error mars most of the work of the last decade. The United States legal authorities are blatantly claiming originality in attempts to suppress an abuse debated by the British House of Lords as long ago as 1880.

"Sex in Society" will be found a peculiarly valuable sociologic work of reference. It is well issued.

JAMES G. KIERNAN.

ELLIS' "THREE MODERN SEERS"

Three Modern Seers. By Mrs. Havelock Ellis, author of "Seaweed," "A Cornish Idyll," "Attainment," "Steve's Woman," "My Cornish Neighbors." London: Stanley Paul & Co. 1910.

Mrs. Havelock Ellis' "Three Modern Seers" is a delightfully written picture of three leaders in thought in the Nineteenth Century who have been much more appreciated in the Twentieth. Concerning the "three seers chosen as representing various sides of the moral, intellectual and spiritual aspects" of the age, Mrs. Ellis uses the following language:

"Hilton, a veritable Don Quixote of the newer morality; Nietzsche, a modern Lucifer of the intellect; and Carpenter, a Child of the

Spirit, all meet on the common ground of a striving toward perfection of individual character as the chief factor in social progress. However contradictory their methods may appear at first sight, these prophets of a sane morality are at one in their plea for a solidarity working from within outward. In their individual conceptions we find that their belief is, that evil is the handmaid of good, and that good is the ultimate conclusion of the whole matter. If the messages of these three latter-day prophets were amalgamated, a practical working scheme for daily living could be easily evolved. To have the courage to face problems according to Hilton, to dare to knock down traditions and conventions according to Nietzsche, to be serene and brave enough to live out what we have discovered, through our introspection and destruction, according to Carpenter, is the way to the larger vision and the definite action.

"Every experiment in fine living is a novitiate for the newer experience which is bound to follow. Today we are on the verge of a great upheaval in our social life, and the followers of men like these three seers of the new order must have the courage to work into definite action the ideals the forerunners have proclaimed."

Hilton, the author of "Rest and Pain" (published in an American edition by Wm. Wood & Co., in 1881), was a lucid outliner of the principles of medical and surgical uses of the rest treatment. Like the paranoiac Nietzsche, albeit in a well-balanced way, he protested against the morbid sympathy which underlies the quackery of Eddyism, Dowieism, Stillism (osteopathy), and useless surgical operations. There is much that is sound in Nietzsche's philosophy, but it is egocentrically marred and twisted by his paranoia. The morbid element in Carpenter looms up in his vegetarianism which is a product, not of hygienic consideration, but of a zoophily that ignores the teachings of race development. Vegetarianism, as was found by Dr. Hahn, son of the founder of the German Society of Vegetarianism, means early arteriosclerosis and hence a mental bias preceding the gross lesion.

The book is portable, printed in clear type, and will well repay perusal by the physician.

JAMES G. KIERNAN.

REDFIELD'S "ACTIVE PRINCIPLES"

A compend of the Active Principles, with Symptomatic Indications for Their Therapeutic Use. By Harold Hamilton Redfield, M. D., Professor of Therapeutics, Bennett Medical College, Chicago. The Clinic Publishing Company. 1910. Price \$0.75.

This little volume will receive a cordial welcome from the modern therapist—the man who believes in using definite remedial agents with scientific precision. The literature of the active principles is yet in the making, and the busy practitioner, unable to find time to read numerous periodicals, naturally finds himself wondering just what results other men have secured from the use of this or that alkaloid.

New uses for even such well-known and commonly used drugs as atropine, aconitine and emetine are constantly being discovered and not a month passes that we do not learn something definite regarding the action of a score of active principles. Facts—based upon extensive clinical experience—are what the general practitioner desires, and these Dr. Redfield furnishes. The author states frankly in his preface that he has not attempted to "tell all there is to tell or to cover the entire field of alkaloidal *materia medica*," but from the constant use of certain remedies he has not only learned many new things but proven correct—or amplified—therapeutic ideas hitherto advanced tentatively.

For instance, anemonin (an active principle found in *pulsatilla anemone* or *anemone pratensis*) is known to be "useful in amenorrheas, dysmenorrheas, and in epididymitis," but Redfield has found the drug to exert its beneficial influence more markedly in pale anemic women with Niobe-like tendencies as also in patients who complain of chilly sensations, nausea and bearing-down pains in the abdomen and sacrum. If the "pains are severe and cause the patient to toss restlessly from side to side," then anemonin will give relief.

So also Redfield has found this drug serviceable in certain gastric disorders and in the "heavy, throbbing headaches resulting from dietary indiscretions;" in diarrheas appearing at night, which the stools are a mixture of mucus and blood—no two being alike;" further, in subacute bronchitis, orchitis, whooping-cough, certain cutaneous diseases, phlebitis, and that form of "rheumatism" in which the pains shift from one part to another, there being little swelling or redness of the affected area, the part, on the contrary, appearing white and cold.

The chapter on Cactin is peculiarly interesting; the special indications for this drug being alliteratively given as "congestion, contraction and constriction."

No physician can read a single page of this "Compend" without getting a new idea or light upon the action of the drug discussed, which will enable him to use it to better advantage. The book is attractively bound, of convenient size for desk use, and should be in the possession of every up-to-date practitioner. A knowledge of its contents will "make for Success."

A LITTLE BOOK ON IMMORTALITY

Dr. C. A. F. Lindorme, of Atlanta, Georgia, has sent us his booklet "On Immortality." This is a subject in which every man ought to be interested and especially every physician. The good Doctor's discussion of the subject is one which will appeal to many readers of the CLINIC.

The price is only ten cents. It may be procured from Dr. Lindorme himself or from the Fowler & Wells Co., 18 East 22nd St., New York City, N. Y.

IMPERIAL "STEREOSCOPIC ANATOMY OF THE HEAD AND NECK"

The Imperial Stereoscopic Anatomy of the Head and Neck. Prepared and Edited by Professor D. J. Cunningham (University of Edinburgh), Professor David Waterson (University of Edinburgh), and Professor Matthew H. Cryer (University of Pennsylvania). New York: Imperial Publishing Company.

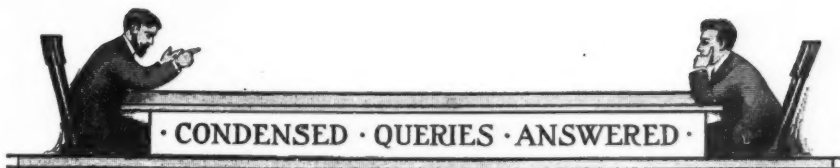
Concerning the underlying idea of this collection the Prospektus aptly says: "Stereoscopic photography as a form of illustration is proving of immense practical value in the modern method of studying the sciences, and especially that of anatomy and surgery. Viewed through a good stereoscope an object is given a more perfect and realistic representation of the original than any artist could make, for his sketch would lack natural perspective."

This highly valuable series of stereophographs illustrates the anatomy of the head and neck in a most perfect manner. The dissections from which the pictures were taken are carefully carried out, and the student will find the views an invaluable help in the study of the anatomy of these regions. These pictures offer a means of refreshing one's memory and of ascertaining the topical anatomy of his operating fields.

KELLY'S "STEREO-CLINIC"

Stereo-Clinic. By Howard A. Kelly, M. D. Baltimore. Southworth Company, Troy, N. Y.

Realizing the many difficulties attending the successful teaching of surgery, even at the operating table, Dr. Kelly has attempted to illustrate and perpetuate the successive steps of important operations by stereoptical views, which he, justly, we believe, holds to be superior both to photographic reproductions and to plaster casts, since the former can only give flat reproductions of the operation and the latter, at least for mechanical reasons, can not become so widely of use and benefit as do the stereoptical views. These illustrate beautifully all the successive steps of the operations shown and permit the student to study the work of the surgeon at his leisure; surely an advantage over the most careful watching of operations, which needs are a "passing show" and which do not always permit a close observation. The publishers are to be congratulated on the beautiful execution of the pictures. That the subject-matter itself is unexceptional in point of selection and usefulness is something upon which we hardly need insist in a work by Dr. Kelly.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5626.—“Glenard’s Disease.” E. K. L., Kansas, writes as follows: “Can you suggest treatment for Glenard’s disease? In my case the principal prolapse is of the liver, the lower edge being below the umbilicus. The patient is a primipara, who had twins (6 and 6 1-2 pounds), one month ago. The organs return to normal position, in the recumbent posture, but drop on sitting or standing. She is constipated, otherwise her health is good. I am using nuclein, Schuessler’s calcium fluoride, laxatives, etc., together with zinc sulphate and hamamelis to the abdominal walls as a local astringent. She carried her babies very high and on the right side, the first being transverse and the second in the right lumbar region at right angles to the first. Uterus is contracting normally. She has weaned the babies, her milk failing. My books touch the subject very slightly and give practically no treatment.”

Glenard’s disease is not easily cured. You cannot expect very much result from the use of astringents externally applied to the abdomen. No drugs so applied could exert any influence upon the enteroptosis. Displacement of the liver is not common, the stomach suffering chiefly. Dyspepsia, dragging pain in the back, throbbing in the abdomen (pulsation of abdominal aorta), as also neurasthenia, are common symptoms. You must bear in mind that ptosis may follow the loss of normal support from the abdominal wall or occur spontaneously in young women of the neurasthenic type.

To treat the condition rationally, one must study his patient carefully. A well-fitting

abdominal bandage is an essential and in many cases will alone prove curative. Constipation must be overcome, assimilation and digestion improved, and neurasthenic conditions controlled. Very rarely surgical interference is called for. You might with advantage give hydrastin, juglandin and strychnine before meals; papayotin after food, and pancreatin an hour later. Dilute phosphoric acid, 10 minims in a glass of water, with meals. Nuclein solution, 6 to 8 drops under the tongue, morning, noon and night. Keep the skin active and clean with sponge-baths and have the patient spend a good deal of her time in the open air. Carefully regulate her diet.

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QUERY 5627.—“Sodium Sulphocyanide.” O. G., Indiana, referring to the mention of sodium sulphocyanide, on page 484, in this journal for May, asks us to tell him the usual dosage.

Sodium sulphocyanide so far is principally used as a reagent and practically unused in this country in medical practice.

In the editorial referred to, “The Value of Therapeutics,” mention is made of Pauli’s experiment. It is a question, however, whether any other clinicians have used this chemical to any great extent. Sodium sulphocyanide (or rhodanide), NaSCN, is marketed in the form of colorless crystals or a white powder. It is soluble in alcohol and in water.

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QUERY 5628.—“Tulip-tree Bark in Tobacco-habit.” J. E. J., Illinois, asks whether we know anything about the value of the

inner bark of the tulip-tree as a cure for tobacco-habit.

The inner bark of the tulip-tree (synonyms: white-wood, poplar, yellow poplar, *liriodendron tulipifera*) is used very slightly as an aromatic stimulant tonic. It has proven beneficial in chronic rheumatism, intermittent fever, chronic gastric intestinal disorders, colliquative diarrhea of phthisis, night sweats, worms, and hysteria. The warm infusion is diaphoretic and in certain states of the system has proven diuretic. An alkaloid (tulipiferine) has been isolated. The bark also contains volatile oils, a peculiar camphor, an acrid resin, and extractive matter. The active properties are taken up by water or alcohol. Tulipiferine is present in very small quantities in *liriodendrin*, the camphoraceous body, which latter has an aromatic, bitter, acrid taste, and is present in considerable amount.

Any aromatic bitter might be of service in controlling the desire for tobacco, in fact any bark possessing stimulant and tonic properties could be chewed with advantage by the individual desiring to relinquish tobacco. We have not personally heard and cannot find any record of tulip-tree bark being so employed. Should you find any information on the subject or experiment clinically, we shall be pleased to hear further from you. We present the suggestion to the readers of CLINICAL MEDICINE, some of whom possibly can throw light on the subject.

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QUERY 5629.—“Maggots in Vomitus.” J. B., Oklahoma, reports an interesting case of this kind, writing as follows:

“On Tuesday evening, May 24, Mr. D. told me that he had become nauseated just after eating his supper and then threw up his meal, and with this some worms. Returning to his house, he brought back three of the worms, still squirming and crawling, although having been vomited up at least thirty minutes before. I told him I thought they were maggots. He objected, declaring that there were a lot of them, and that he was very particular about his food, did not eat any raw vegetables, but little meat, and what food he ate was well cooked, his main diet

being milk, butter and bread-stuffs. He is a laboring man and was sincere in his statements.

“Those worms have the appearance of maggots. The head tapers to a point, the tip of which is black. The tail-end is blunt. I gave him a round of calomel and santalin, since which there has been no further trouble. My opinion is that he swallowed the ova in his food and they matured in his stomach. I have seen patients vomit roundworms, but never anything like this before. There is nothing in any of my medical books which describes any such worm in the human system. If these were maggots, what would have been the probable results if they had not been vomited?”

This subject has been discussed many times in the past, and, as you know, individuals often have claimed to have vomited maggots, worms, toads, small frogs and snakes and the like. In many instances these claims have been most sincerely advanced, the reptiles or parasites gaining access in some unexplained way to the vomitus.

We need not explain to you how absolutely impossible it would be for the ova of the bluebottle or other fly to hatch in the stomach or even survive for a few hours the action of the gastric juice. We may, with absolute certainty, exclude the theory that your patient ingested ova which matured in the stomach to be vomited later on. It is equally impossible for such a parasite to reach the stomach from the intestine. Only one plausible explanation remains, namely, that the man swallowed food containing the larvæ a short time before the vomiting attack. Had larvæ been any length of time in the stomach or subject to the action of the gastric juices, they certainly could not have been voided “squirming and crawling.” But we cannot comprehend how a large number of larvæ could be vomited by an individual who is “particular about his food.”

There is just one other point to be considered, and that is the possibility (a very doubtful one) of the existence of maggots in the nasal cavities of this individual. Several such cases have been reported, as you doubtless are aware, of maggots in the nose, the

eggs of meat-flies having been deposited upon a raw surface and the larvæ developing in the nasal cavities. In one case the patient was greatly annoyed by an itching and crawling sensation in the nose, but thought nothing particular of it until several maggots had dropped from the nostrils upon the table in front of him. A physician removed a score or more of well-developed maggots. The writer recalls reading the description of another case of very similar character occurring in the practice of an Indiana physician, last year. It might be well to examine your patient's nares thoroughly.

As to "the probable result had the maggots not been vomited", without doubt they would have been digested, with the fate of all other animal matter ingested.

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QUERY 5630.—"Codeine Dosage in the Anodyne Formula." J. L. A., Pennsylvania, comments on the formula of the "anodyne for infants" granule. The codeine-content is 1-67 grain, and doses of one or two granules every fifteen or twenty minutes until result is obtained are recommended. This seems to the doctor "such an enormous dose of codeine" that he thinks possibly there is a mistake somewhere. He writes: "It would seem to me that 1-670 grain would more nearly come right with the proportion of the other ingredients. To my mind, 1-67 grain of codeine would be a fair dose for a child one year old, not to be repeated within two to four hours."

The quantity of codeine present in the anodyne for infants granule is 1-67 grain. The anodyne is usually given in sweetened solution and always so exhibited to very young infants.

Bear in mind that the directions "to effect" mean remedial or physiologic. If the physiologic action of the drug is apparent before remedial results are secured medication should be stopped, as we have either erred in our selection of the remedies or omitted some essential therapeutic procedure.

As a matter of fact, 1-67 grain of codeine is not an excessive dose for a child presenting the disorders calling for the use of an opiate. should not hesitate to give a second

granule in thirty minutes. Naturally, we should not continue such exhibition but order one-half or a whole teaspoonful of sweetened solution at desired intervals to effect. As little as 1-670 grain of codeine would practically be useless, as you will readily discover by experiment.

When dealing with an infant a month or eight weeks old, the condition present not being severe, it would be wise for the physician to prepare a solution of the granule (1 granule to the fluid dram), ordering 10 to 20 or 30 drops, as occasion may demand, half-hourly or hourly. If immediate relief is necessary, however, the granule itself may be given, and if it does not prove effective within thirty minutes, a second such dose might be exhibited with perfect safety, the effect being maintained (or even enhanced) by several subsequent smaller doses. Children, as you are aware, bear codeine fairly well, the dose of this opium alkaloid for an adult, in fact, being 1-2 to 2 grains. The effect of codeine in the formula in question is also mitigated by the presence of nickel bromide and lithium carbonate.

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QUERY 5631.—"Phenol Applications on Scabies." W. H. Y., Arkansas, in giving a treatment for ordinary itch (scabies), says: "This is a local trouble caused by the itch-mite. A local application destroys the germ and cures the patient at one application. Apply phenol, pure, to the parts; and when it is a whitish gray color, wash well with alcohol or acetic acid to prevent a burn. Thus you have entirely removed the cause. This treatment is cheap but sure."

Doctor, the method you outline has long been generally known. However, if the use of carbolic acid suggested itself to you it shows that you do your own thinking and your patients are to be congratulated.

Unfortunately even the application of pure phenol (neutralized with alcohol subsequently) does not always prove a specific treatment, the itch-mite boring deeply into the skin where carbolic acid cannot possibly destroy it—unless the skin itself is also destroyed. Superficial scabies can be so cured, however.

QUERY 5632.—“Wanted, A Remedy for Eczema.” W. C. B., Iowa, wants a remedy for a chronic case of eczema. The doctor remarks that such a multiplicity of remedies are mentioned that it is difficult to select the proper ones. He has tried the old regular drugs, but without success.

The reason for the mention of a multiplicity of remedies for eczema is that a multiplicity of different conditions present themselves in various individuals. The treatment which proved efficacious in A's case might prove worse than useless in B's.

The remarkable results secured by the positive therapist are practically due to the fact that he ignores named diseases, that is, does not treat “eczema,” “pneumonia,” “typhoid fever,” etc., but familiarizes himself with the underlying disorders of the body-chemistry and selects his remedies with a clear conception of the pathologic conditions obtaining in the individual.

The local use of some of the distillates of shale containing phenol and guaiacol is nearly always indicated. Applications of any mild antiseptic oil also generally is useful. Especially is this the case in dry eczema. In every case it is essential to eliminate thoroughly and to maintain intestinal cleanliness. The elimination of solids must be kept to standard and a normal output of urea maintained. Iridin and alnui may be pushed advantageously together with nuclein and arsenic sulphide. In some cases, however, arsenic in any form is contraindicated.

Suppose, Doctor, that you give us a clear idea of the condition you have to deal with, accompanying the full clinical report with a specimen of the patient's urine.

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QUERY 5633.—“The Alkaloids and ‘Specific Medicines.’” C. R. K., Ohio, who has always been a firm believer in the use of active principles, wishes to know of the relative advantages of the specific medicine of the eclectic practitioners, the galenic remedies and the alkaloidal granules.

We would suggest that the doctor read carefully that portion of the “Digest” sub-headed, “An Alkaloidal Primer;” also the

chapter, “How to Begin the Practice of Positive Therapeutics.” Then note carefully the paragraphs, “What Alkalometry Does,” and “What Alkalometry Means.” We think he will then understand why the intelligent use of small quantities of stable, evenly potent and definitely acting remedial agents is preferable to any other form of medication.

Unfortunately, we have not as yet been able to isolate the active principles of all the valuable vegetable drugs and therefore it is frequently desirable to use the so-called “specific medicines” or standardized extracts, physiologically tested. We look upon Lloyd's preparations as the next-best thing to the active-principle granules and tablets. Specific medication, whether taught by Scudder, Burggraeve, Abbott, or anyone else, is rational, and the profession is deeply indebted to its exponents. The merit of the work of John Uri Lloyd, Ellingwood and other eclectic writers will sooner or later be universally recognized.

The active-principle remedies are superior to “specific medicines,” (1) because they are easily portable; (2) because they are not liable to evaporation or deterioration; (3) because at any place and under any circumstances the physician can immediately exhibit the desired dosage of the exactly indicated remedy and repeat the same until the desired effect (or physiologic action of the drug) manifests itself. Using any form of medication except the alkaloidal granules and tablets, the doctor could not carry some sixty or seventy varieties of drugs (and several hundred doses of each variety) on his professional visits. The so-called “alkalometrist” does this every day. With a precise knowledge of his materia medica and good diagnostic acumen he is able to make a correct selection of remedies, instead of merely guessing, giving, mayhap, something which fortuitously may do the work or may not.

Those who know most about the crude drugs on the market understand thoroughly their variable quality, and that for instance one parcel may contain, say, ten percent of a certain alkaloid, another sample twice

that quantity, and yet another practically none at all.

Rusby, in a most interesting report, gives a list of drugs grossly and quite commonly adulterated, telling that frequently, indeed, the entire parcel of a given drug proves spurious. Thus powdered gentian, he found, contained fifty percent gunny-sack fiber. Another sample consisted largely of damaged wheat flour. Cut dandelion root proved, upon examination, to consist largely of small stones of adequate size and color and a worthless root. The peelings of chicory are used to adulterate ground dandelion root. Belladonna root contained from ten to sixty percent of poke-root.

The extraordinary lack of results which not infrequently follow exhibition of fluid preparations of belladonna are doubtless due to such sophistication. The doctor giving, without effect, five, ten and even twenty drops of fluid extract belladonna gets an unpleasant shock when toxic symptoms result from the use of half the quantity of a different specimen.

Powdered ipecac, to return to Rusby's report, consisted chiefly of powdered olive pits. Not much emetine or cephaeline there! Ground male-fern root contained not even a particle of active material but the chaff and refuse which the Pharmacopeia directs should be rejected. Spigelia was almost wholly spurious or else largely adulterated. Lobelia consisted of useless stems. Skull-cap was represented by a herb of different species. Stramonium was adulterated with chestnut leaves. Henbane consisted wholly or in part of leaves of another species. Digitalis leaves were spoiled, moldy, or mixed with an equal amount of rubbish. (At the present time digitalis is almost unobtainable and the prospects of a crop this season are poor.) Coto and paracota barks were found to be spurious nineteen times out of twenty. Arnica root was found not to be arnica at all. Quebracho and other alkaloid-bearing drugs were found from which the alkaloid had been extracted by foreign manufacturers.

These are but a few examples, but they serve to show the character of the raw ma-

terial from which the manufacturing pharmacist makes his fluid preparations.

The fluid extract secured from manipulation of several hundred pounds of such adulterated drug would doubtless look as beautiful and taste as unpleasant as the real thing, but the therapeutic results following their use could best be represented by a big interrogation mark.

That these drugs are constantly offered, sold and consumed, proves conclusively the unreliability of at least a proportion of the so-called U. S. P. preparations. There are, of course, honest chemists—firms whose employees are thoroughly skilled and instructed to use only the best drugs obtainable, *but*—the sophisticator is shrewd and the chemist does not investigate each parcel of crude drug which goes into his mill or percolator.

Standardization does help some, and the doctor who dispenses only physiologically tested extracts or tinctures emanating from one of the reputable houses is less likely to lose his faith in the efficacy of medicines than the man who buys anything which is "cheap enough." But he has to "trust to the skill and honesty" of several individuals: the man who identified and passed the crude drug; the chemists who prepared the extract; the physiologic chemist who tested the finished product (standardized it); and, finally, the retail druggist who sold him (or dispensed on his prescription) the extract as from So-and-So's laboratory and duly assayed.

If standardization means anything (and it does), it assures the presence of a certain quantity of active principle. If one can secure that principle absolutely pure and stable, in mathematically correct dosage, without the addition of bulky and useless excipient or vehicle, isn't it desirable to do so? Adulterated or false drugs will not produce the desired active principles. Just so much alkaloid, glucoside or resinoid can be obtained from a given quantity of drug as exists therein—no more. There may be but ten grains in fifty pounds or one hundred grains in one pound—everything depends upon the quality of the drug. But the fifty

pounds of drug containing but ten grains of active principle would make several pints of fluid extract, whereas the one pound could at best produce a quart.

There would naturally be a considerable difference in the efficacy of the two specimens. The alkaloidal granule contains exactly the amount of the active principle that its label states. There is no weighing; no guess-work; no possibility of deterioration from age or exposure; no chance of variation in strength from evaporation or "settling to bottom of the bottle"—just so many full doses of an unchangeable drug of known efficacy. In short, the alkaloidal granules are definite agents.

The best galenics must be more or less uncertain, if for no other reason than the presence (in unknown quantity) of two or more active principles, one of which may neutralize entirely the action of another. If you do get a perfect fluid extract of, say, *jaborandi*, you can't tell whether *pilocarpine* or *jaborine* predominates. *Jaborine* exerts an influence diametrically opposite to that of *pilocarpine*. And so throughout the list—the active principle spells "precision," the galenic, "uncertainty."

QUERY 5634.—"Infantile Paralysis in Arkansas." D. C. M., Arkansas, writes: What do you know of infantile paralysis? We have it here in full sway and do not know definitely the cause or what to do for it. Now I value your judgment very much and I want it just as soon as you can possibly give it to me. I want to know the cause and the treatment if you have it. If you can't give it to me I'm up the stump. Had thirty-five cases here in one day; it is simply awful. Do the best you can for us, Doctor—we're in sore need of advice."

We regret exceedingly that you did not give us a clearer idea of the exact conditions which are obtaining, as seemingly a widespread epidemic of "infantile paralysis" exists.

Physicians in various sections of the country are giving widely different clinical pictures. In several instances death has resulted in four or five days, the temperature

not exceeding 103° F. at any time, paralysis existing in both arms and legs, little pain, no opisthotonos or involvement of sphincter. Death seemingly due to respiratory paralysis. In some cases the arm upon one side and leg upon the other have been affected first, the paralysis later involving the other extremities. Again, the arms have been paralyzed early and the leg or legs later. If you have to deal with true anterior poliomyelitis, you must remember that during the acute stage little can be done. The child must be kept quietly in bed in a darkened room, the bowels should be cleansed with small doses of calomel and podophyllin, followed by a saline. Flying blisters may be applied to the spine advantageously, and *guaiaicol* rubbed in over the abdomen or under the arms upon the chest-walls in case the temperature should exceed 102° F.

We should, in these cases, push *echinacea* and *nuclein* in full doses, with arsenic iodide, gr. 1-67 every two or three hours for twenty-four hours, then every four hours. Bathe the entire body of the child with warm epsom-salt solution (one ounce to three pints), twice daily. Inunctions of *unguentum Credé* or intravenous injections of colloidal silver should be tried.

It would not be safe to recommend more than a *basal* treatment, but the physician in charge will, of course, meet conditions as they arise, not forgetting to maintain intestinal antisepsis throughout. From ten days to two weeks after the acute stage is past, the doctor should commence to maintain and improve nutrition of the affected groups of muscles. Electricity, massage, modified gymnastic exercises will prove beneficial. The faradic current may be used to induce contraction of the muscles. If this fails, use the galvanic. Sitting should not exceed ten minutes. Once daily the parts should be massaged thoroughly, preferably with a vegetable oil.

We trust you will give us a clear clinical picture of a typical case, outlining distinctly the peculiar symptoms encountered. You will find a description of a very remarkable case of a similar nature in another column.